

# ARIZONA MEDICINE

*Journal of* ARIZONA MEDICAL ASSOCIATION

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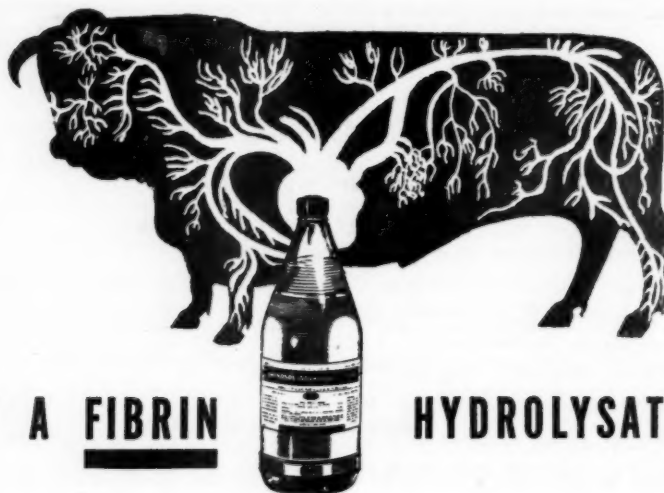
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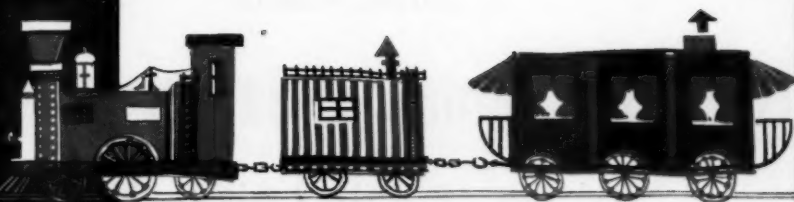
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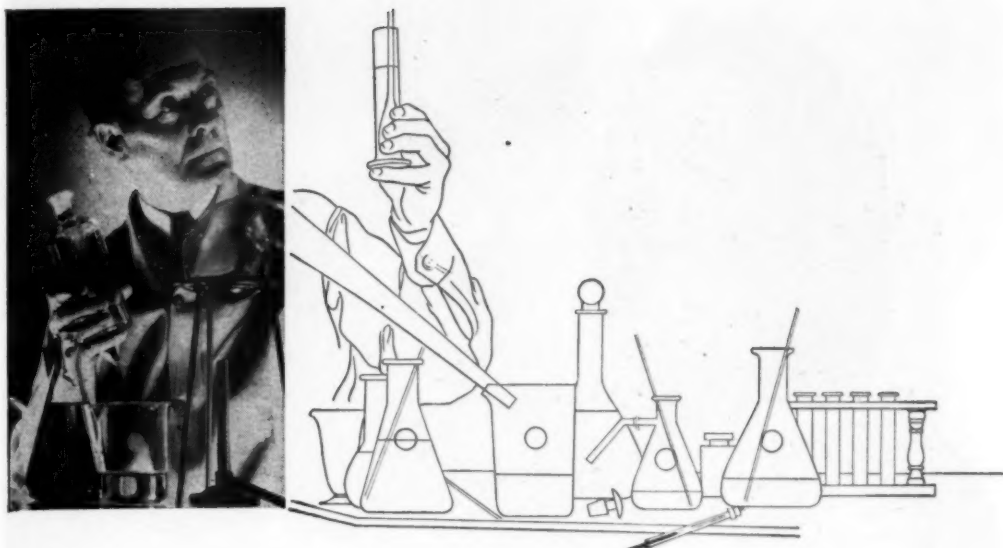
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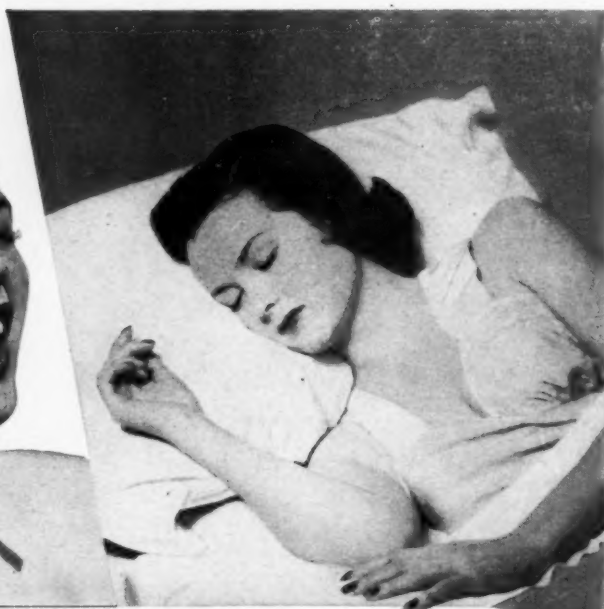
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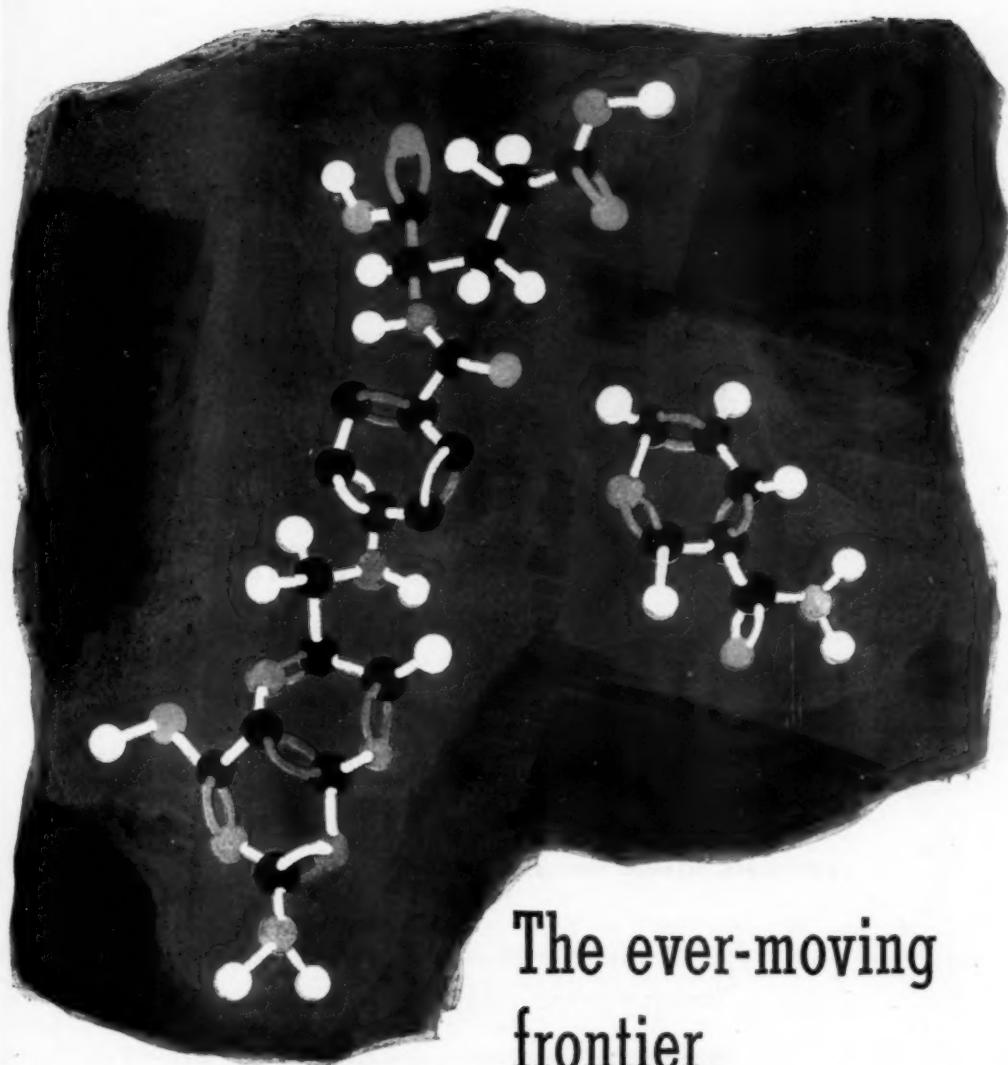
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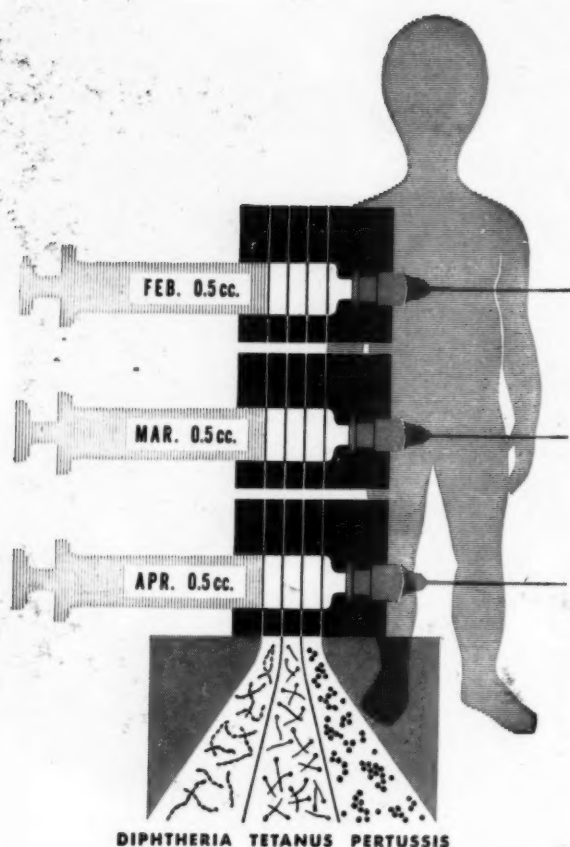
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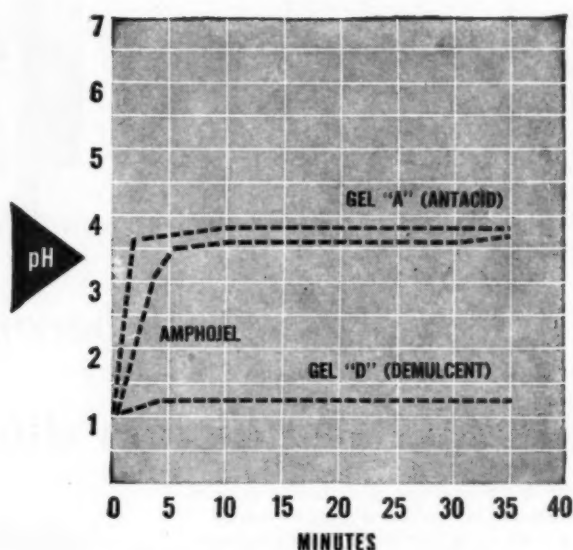
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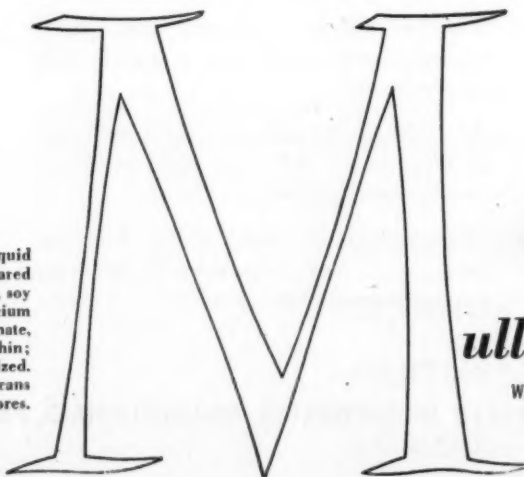
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# ARIZONA MEDICINE

Journal of ARIZONA MEDICAL ASSOCIATION

VOL. 6, NO. 5  MAY, 1949

## A CRITICAL ANALYSIS OF ASEPTIC TECHNIC FOR TUBERCULOSIS

WILLIAM H. OATWAY, Jr., M. D.

THERE is a great need for a trustworthy set of rules to protect the people in contact with tuberculous patients.

There is an even greater need for a more general application of existing methods, not only in sanatoria, but in hospitals and homes.

An inclusive list of procedures has been compiled by a number of authors in recent years. It is the purpose of this paper to analyze the methods, point out the flaws, suggest corrections, and to show the surprising completeness and efficiency of the technic in general.

The exact number of beds which are available for tuberculous patients is not agreed upon. It is said that there are about 80,000 beds in "tuberculous hospitals," of various types in the United States; the usual census is about 62,500 patients, with about 99,000 admissions to 441 institutions per year.<sup>1</sup> Another survey lists a similar total of beds (81,800), but in 452 sanatoria and the tuberculosis sections of 104 hospitals.<sup>25</sup>

These are public and private institutions, but do not include the facilities of the armed forces, Veterans Administration, mental and prison hospitals, or preventoria. The Veterans Facilities alone include 18 tuberculosis hospitals and 13 others in which treatment is given.

The number of general hospitals which will admit tuberculous patients is also indefinite. It was placed at 439 in 1940, estimated at more or less than 40% on other occasions, etcetera. This variance is due to the elasticity of the claims and facilities of the hospitals, and to the fact that all hospitals unwittingly admit the tuberculous—knowing it only when a case is later diagnosed, when it dies, or if the hospital has a routine chest x-raying program. The number

with a favorable attitude, however, undoubtedly will increase as new information and modern methods prevail, and as more case-finding x-ray programs are adopted. Two hundred and forty-five general hospitals now have routine x-ray programs, and hundreds of others have equipment or plans for such a method.

There are always several times as many individuals with known active tuberculosis living outside of institutions as in them, a ratio which varies with the number of available beds and the intensity of local or state case-finding and control programs. Finally, there are an estimated 500,000 to a million or more people in the United States with undiscovered, unsuspected, potentially infectious tuberculosis. (This number can be disputed, dependant as it is upon terminology and estimates of activity, but it may well amount to 1% of the population.)

All of these people should be diagnosed, carefully observed, treated as indicated, and their contacts should be adequately protected.

### *The Essentials of Asepsis*

*Aseptic technic* is a routine for protecting the contacts of tuberculous patients. It has been called isolation technique, isolation precautions, aseptic precautions, infectious (or communicable) disease precautions, etc.

The routine consists of a number of logical methods to prevent the spread of infection. Various forms of this routine have recently been very well presented in texts by Cady,<sup>2</sup> Longhurst,<sup>3</sup> Hetherington and Eshleman,<sup>4</sup> by Myers and his co-workers in several articles,<sup>5</sup> by Oatway in a manual for the American Hospital Association,<sup>6</sup> and by Katherine Amberson and consultants for a group of nursing organizations, under

the auspices of the National Tuberculosis Association.<sup>7</sup> The Veterans Administration has also composed several bulletins and directives.<sup>8</sup>

Aseptic technic includes those methods which are applied to *the patient, to his contacts, to his service, and to his environment.* It involves *facilities for isolation, placement of the patient, and care of the patient.* The routine may be limited to a few obvious essentials, or include a complete list of all possible methods—a choice which is dictated by circumstances rather than need. All authors urge that it is best to err on the side of safety, and that the frail human element must be remembered when plans are made. It has been clearly demonstrated that protection is possible, and that the less the exposure and the more perfect the technic, the smaller the hazard which results.

The usual *source of infectious material* is the respiratory tract. Contamination may occur in three ways,—*direct*, by contact with the patient; *indirect*, by the handling of contaminated materials or objects; and *air-borne.* The newer analysis of air-borne transmissions has shown three distinct pathways by which bacilli may travel,—*droplets* (which are larger than 0.2 mm., not a cause of infection by direct inhalation, and which quickly clear from the air by gravity); *droplet nuclei* (which are less than 0.1 mm., quickly evaporate, continue to float, and are a dangerous cause of infection); and *dust* (which may contain dried droplets and be dangerously blown or displaced).<sup>7</sup>

#### Emphasis of Need

Several factors have combined to make the practice and efficiency of aseptic technic a matter of importance:

1. The increasing *tendency to hospitalize tuberculous patients.* This is a logical and necessary step in the control of tuberculosis. Segregation is helpful in prevention and diagnosis, as well as therapy.
2. The *expanding facilities for care of tuberculosis.* Cities, counties and states are all arranging for more beds, often with federal aid. The armed services have enlarged quarters, and the Veterans Administration is building ultra-modern facilities.
3. The knowledge that *contact with patients* may cause a relatively high incidence of infection and disease. These facts come from studies on unprotected family members, medical students, and hospital and sanatorium personnel groups.
4. The knowledge that *aseptic technic can decrease the hazard.*

5. The *medico-legal aspects* of new infection and disease. Compensation is now an approved principle, and widely adopted.
6. The *demands of public health requirements, of humanitarianism, of pride and good sense.*
7. The development of "*resistant*" strains of bacilli in patients treated with streptomycin, producing an added hazard to contacts.
8. The *refusal of some hospitals to accept tuberculous patients, or to use any precautions at all, due to uncertainty about the value or type of routine.*

#### Sites of Usage

The situations in which aseptic technic can be of value are:

1. Tuberculosis *sanatoria*, where it is often used casually or incompletely.
2. Tuberculosis units in *hospitals.*
3. *Homes* in which tuberculous patients are being cared for.
4. *Laboratories* in which tuberculous patients, or specimens, are being examined.
5. *Necropsy-rooms* in which some or all of the necropsies are on the tuberculous.

The exact methods which are most suitable for each of these locations differ, but most of the fundamentals are the same. The procedure for #4 and #5 can be easy and simple, due to the localized, brief, and inanimate nature of the hazard. The routine for sanatoria, hospitals, and homes must consider the human element, a dynamic infectious hazard, and a prolonged period of contact.

#### Control in Hospitals

A *general hospital* presents the most complicated problem of any of the situations listed. Patients in the tuberculosis units of hospitals are often either grossly infectious, acutely ill, and incapable of self-care, or they are cases of minimal disease, newly found, and unversed. The medical, nursing and auxiliary personnel are often impermanent and not specially trained. This combination requires the most complete and detailed solution.

The *object of the present report* is to briefly describe and analyze the methods of a complete program, and that of the general hospital is most suitable. The results can then be applied, where indicated, to sanatoria, homes, etc.

It has been said that the technic should be based on a recognition that it must be fool-proof; that suitable equipment and facilities must be provided; that nurses, etc., be taught the technic and urged to use it, but that they not be wholly trusted to do so; and that periodic in-

spectations and revisions be made of the routine and its usage.

It should be mentioned that *isolation technic is only one of the means for control of tuberculosis in general hospitals*. Other approaches include:

1. The examination of all newly admitted patients, and out-patients, by x-ray of the chest.
2. The examination of all new and previously employed personnel members by x-ray of the chest. Re-examination of all members, the frequency to depend on the amount of contact with patients.
3. The purposeful admission of tuberculous patients for diagnosis, therapy, and/or isolation.
4. The establishment of a place in the hospital for care of tuberculous patients, both purposely admitted and newly discovered.
5. The establishment and application of an aseptic technic.

Several factors may modify the extent and type of methods to be used, including the size of the hospital, the presence of teaching facilities, the extent of the tuberculosis unit, etc.

#### *Principles of Protection*

In general, the ways to avoid contamination are to reduce the number of bacilli expelled by the patient, to reduce contact between attendants and patients, and to apply a routine of aseptic precautions.

In other words, one must plan to:

1. immobilize the bacilli near their source.
2. collect the secretions.
3. protect the contacts.
4. cleanse the environment (by destruction, disinfection, or sterilization of the secretions, equipment, surfaces, and contact materials, using fire, heat, chemicals, and ultra-violet rays as the chief methods).

#### *Fundamental Steps*

To establish a control program in a general hospital, the following steps must be taken:

1. Agreement by the hospital board, the superintendent, staff, teaching services, unions, and x-ray department on the objectives and general methods.
2. Designation of a supervisor for initiation and management of the routine.
3. Designation of a room, rooms, ward, or a building as a unit for segregation of patients.
4. Equipment of the unit with suitable furniture, flooring, plumbing, partitions or screening, as needed.
5. Instruction of the Registration Desk personnel, as follows:
  - a. known tuberculous patients must be routed to the unit at once.

- b. out-patients should be ex-rayed as soon as possible. There should be daily sanitation of the area and special attention to coughers. Tuberculous out-patients should be segregated, cared for quickly, crowding avoided, and sanitation stressed.
- c. new admissions should be x-rayed quickly, suspicious lesions deported at once and the patient isolated immediately. Patients are to be treated as good sense indicates before the report is available.
6. Placement of the tuberculous patient on the unit. Location should depend on the degree of infectiousness, relative illness, sex, temperament, cooperation, finances, etc.
7. Establishment of zones of relative contamination on the unit.
8. Arrangements for education of the various people involved. Outlines, notices, signs, classes, rounds, post-graduate courses, etc., may be used.

Education and training must reach the following groups, and a detailed routine must be arranged for their care and protection:

- a. the patient.
- b. the visitors.
- c. the nurses (supervisors, staff, and students).
- d. the medical personnel (visiting, resident, students).
- e. the attendants in contact (orderlies, janitors, maids, etc.).
- f. the special medical services (laboratory, x-ray, surgical, dentists, physiotherapy, pathology, etc.).
- g. the special personal services (laundry, food - handling, dish-washing, waste-disposal, etc.).

Details which are not discussed in this article may be obtained from the newer texts, from the American Hospital Association manual,<sup>6</sup> or from the forth-coming Joint Tuberculosis Nursing Advisory Service outline.<sup>7</sup>

#### *Materials for Care and Housekeeping*

Certain housekeeping arrangements must be made, some of them specifically for the care of tuberculous patients. At the time a unit is established, a list of materials should be made out, the exact brands chosen, and enough supplies purchased to form a reserve.

Paper wipes and towels, large and small bags, paper cups and holders will be needed in quantities. Towels, wash-cloths, bed-gowns, bed-linen, blankets, etc., are of the same quality and quantity as used on other wards, but a large supply of gowns, masks and caps for people in contact



must be available to suit the volume and turnover of the unit.

Water-glasses, pitchers, and salt and pepper shakers for bedside use should be chosen for durability and recurrent sterilization. A place for separate clothes storage, and a place for airing and sunning clothes should be arranged. Washable bedside cabinets for personal property and toilet articles must be chosen to suit the need.

Metal baskets and containers, washable tables, carts, wheel-chairs, and furniture must be provided.

Tools and cleaning agents may differ somewhat from those used on other wards. Antiseptics, soaps, abrasives, sweeping compounds, oil, etc., must be aimed at dust, dirt, and the tubercle bacillus; some of them are discussed later in this survey.

#### *Excessive Hazards*

There are a number of places in a precautionary routine where the hazard of contamination is greater than others, or where the chance of non-observance is greater. Part of these hazards are due to the nature of the illness, but part are due to human failings. They are the places we must watch and protect most carefully. They include:

1. *Lapses in self-care by the patient.* They may be careless, wilful, or due to severe illness.
2. *Lapses by personnel members.* They may be due to lack of training or to carelessness.
3. *Lapses by visitors.* They may be due to lack of instruction, carelessness, or emotion.
4. *The uncovered cough* (or sneezing, laughing, talking, throat-clearing).
5. *Contact of materials, objects, or hands with the patient's mouth.*
6. *Contact with the patient's hands.*
7. *Contaminated bedclothes,* both grossly and by droplets.
8. *Contaminated hands and clothes* of the persons in contact.
9. *Contaminated air,* by droplet nuclei.
10. *Contaminated dust.*
11. *Contaminated floors, woodwork, and furniture.*
12. *Contaminated dishes and laundry.*
13. *The nose and mouth of persons in contact.*

#### *Notable Flaws.*

Some of the hazards listed above are either relatively unimportant, or may easily be cared

for. A few of them represent notable flaws or weak spots:

1. *The habits of the patient* are probably the most important factor in an aseptic routine. The patient must understand the theory of contamination; he must be willing to help; he is responsible for catching the bacilli near their source and disposing of them; he must practice the methods until habits are formed; and the habits must be constant and inviolable. It is a heavy load, a lot to expect. It is usually too much for even one with all of the above good qualities. It means that other methods must be used.
2. *The uncovered cough* is the most important flaw in habits of a patient. It is often impossible to prevent or control a cough, or cover the mouth before the tussive blast (or sneeze, etc.) occurs.
3. *The hands of the patient and attendant* are in contact with potentially contaminated sources and objects more closely than any other vehicle. Observation of the patient will show that his hands touch his mouth innumerable times of which he is unaware, touch secretions on paper wipes, etc. The hands of nurses touch their mask, glasses, hair, etc., actually while they are denying it.
4. *Bedclothes* are located directly ahead of the mouth, and are in frequent contact with the hands. They are probably contaminated by any slip of technic. The bed-linen is changed every 2 to 4 days, but the blankets may become a depository if technic is careless. Shaking and flirting the sheets and blankets is a common and unnecessary way of spreading dust.
5. *The floor* receives everything which fails to adhere to the bed—cough droplets, dust, contaminated wipes, etc.
6. *Dust* is a combination of dirt, soot, lint, hair, etc., and as such it may contain bacilli from dried droplets and droplet nuclei. It may drift to vertical surfaces (chairs, walls, etc.) or to horizontal surfaces (the floor, ledges, cabinets, etc.).
7. *The respiratory tract* (and its portals) of persons in contact with the patient must be considered exceptionally vulnerable, and requires special precautions. Since attendants must care for the patient and also must breathe, all efforts should be used to prevent entry of bacilli. There is plenty of evidence that such protection is possible and effective,<sup>9, 10, etc.</sup> The wearing of masks, and their construction and composition, are of most importance.
8. *The uncertain value of several antiseptics* and methods is also a weak spot in the technic.



*The Need for Research;  
Unproved Barriers*

There are several aseptic methods and materials which either can't be used, or are used without good evidence of their efficiency. It should be known whether, and to what extent, a method decreases contamination, protects people in contact, or possibly increases contamination.

It should be mentioned that among the antiseptics only the alcohols, cresols, and formaldehyde have any appreciable effect on the tubercle bacillus, and only the first two are practical.

1. The value of *cresol compounds* is at present a matter of dispute. They have an unpleasant odor but are good cleaning agents. One of the best recent outlines<sup>7</sup> omits the cresols (including "Lysol," liquor cresolis saponatus USP, etc.) from all use as a cleaner of floors, and limits their use to processes where soaking for 15 to 20 minutes is possible (2% in soft water, 5% in hard water). Another outline<sup>6</sup> includes the cresols as interval and terminal cleaners and antiseptics for floors, woodwork, washable furniture, etc., suggesting that it is effective on contact in 1% solutions. *This uncertainty and limited use is mostly due to an absence of modern testing.* Correspondence with several chemical companies indicates that they rely on ancient studies, or have not tried cresol against the tubercle bacillus at all. Testing the resistance of tubercle bacilli is known to be difficult and unsatisfactory, but work on the alcohols suggests that it should be possible. Almost all of the research has been Germanic and most of it was done on cloth heavily soaked with sputum. This is not comparable to the conditions for which cresol compounds are often used (light droplet contamination).

Klarmann, however, has reported<sup>22, 23</sup> that Lysol is effective against the tubercle bacillus; that it kills in 10 minutes at 20 deg. C., in a strength of 1:400 in water (or 1:600 at 37 deg. C.); that it is more effective than cresol (just as its phenol coefficient is 5, as compared to 2 for cresol). He does not report data on *shorter exposures or greater concentrations*, but it is known that the usual action of cresol, Lysol, etc., increases its speed in an exponential manner depending on the concentration.

In view of the need for a combined cleanser

and antiseptic, it is strongly urged that tests be done on the cresols to determine:

- a. the effect of  $\frac{1}{2}$  to 5% dilutions.
- b. the effect of  $\frac{1}{2}$  to 5 minutes exposures.
- c. the best cresol compound.
- d. an odorless cleanser and antiseptic preparation.
- e. the effect of cresols on wet and dry preparations of sputum.
- f. the effect on thick and thin preparations.

We have information that these points are now being checked.<sup>23, 24</sup> Two relatively odorless, detergent, phenol derivatives "Amphyl" and "O-Syl" (by Lehn and Fink, manufacturers of "Lysol") are now being produced, after a discontinuance during the war. Their effectiveness against the tubercle bacillus is said to be similar to that of Lysol, and this is being checked in an independent laboratory.<sup>24</sup> A notable point in their favor is the economic one,—cresol (USP) costs \$2.75 per gallon retail; Lysol and O-Syl cost \$3.00, and Amphyl \$5.00; the cresol must be used in greater concentration; Amphyl and O-Syl are odorless; cresol is said to be in short supply at present.

2. The exact value of *soaps* is not certain. Detergents (including soaps) are used for intercurrent and terminal cleaning of rooms, yet they are not considered to be antiseptic for tubercle bacilli by authorities.<sup>7, 20, et al</sup> Hexol, Roccal, Zephiran, etc., are widely-used trade-preparation cleansers, but neither they nor their ingredients are proved to have specific value.

The use of detergents on *floors* during terminal disinfection would be for from effective unless they are also antiseptic, since mopping removes only the obvious dirt, and leaves a portion which may potentially contain tubercle bacilli, yet soap is listed as the only cleanser in a situation which requires an antiseptic.<sup>7</sup>

*Hand-washing* is a standby in aseptic technique. It should be certainly known whether soap is simply an aid to ablution, or is bacteriostatic.

Soap is a factor in the *washing of clothes* only as a remover of dirt. Sterilization depends upon a pasteurization-like exposure of white clothes to temperatures above 140 deg. F. (usually 165-180 deg. F.), six to eight times, for a total of at least 30 to 40 minutes. This formula is that which is generally used in standard laundry practice.<sup>7, 21</sup> It can also be used for clothes which are partly "fast" colored. Temperatures used (100-110 Deg. F.) for most other colored

clothes, however, can not be considered suitable for the laundry of clothes from tuberculous patients. Sheets, towels, etc., are usually made of white cotton materials, and are laundered routinely; articles of clothing, for optimal safety, should also be limited to materials which will tolerate the standard formula, both in hospitals and homes. Grossly contaminated pieces should always be excluded; they may be soaked for a half hour in a 2 to 5% solution of cresol, then washed. "Fluff-drying" or "tumbling" is done at a temperature of 160-180 Deg. F., which aids in sterilization; drying in the sunlight is also of help; and pressing or mangling (done at a temperature of 300 to 360 Deg. F.) is certain to complete the job of sterilizing. Commercial laundries which use a standard formula are said to be superior to home-laundering unless higher temperatures and more frequent rinses than usual are used in the latter.<sup>21, 7</sup> It is wise for the supervisor of a tuberculosis unit to check the laundering practice at intervals.

3. Vacuum cleaners have recently been suggested for cleaning of rooms containing tuberculous patients. The theory is a good one, and the practice would be simple, particularly for intercurrent use. Machines with a water filter, or a disposable paper bag, were especially recommended.

Satisfactory tests have not been made of their efficiency in tuberculous environments, however. Since dust is the vehicle, tests should be made of the bags for leaks, and of the air which leaves the water filter.

5. *Face masks* have not been completely studied. They have two uses—for the patient, and for the person in contact.<sup>6, 7, 11, 12</sup> Masking of patients is a valuable procedure, though not often used. It obstructs the exit of secretions at a place near their source. All untrained, ill, and careless patients should wear them. They need cover only the mouth, may be raised for expectoration; may be made of soft paper or a cellulose material, and may be discarded after one usage.

Masking of contacts is necessary when they are in intimate contact with patients, especially those who are grossly infectious, liable to cough, or careless. The mask must cover the nose and mouth closely. It probably is most valuable against droplets (direct blasts). Gauze masks are said to be most efficient when they have a central flannel filter. Cellulose masks are more

efficient than gauze, but are more costly and less durable.

Tests of masks on volunteers have been made, using non-pathogenic bacilli, but they have not been extensive. Comparisons of the protective effect against tuberculous infection, as compared with unmasked controls, have not been extensive or easy to evaluate. Masks have recently been tested on animals, and the data may be of great importance;<sup>13</sup> under the conditions of the study, the masks had a more than 90% efficiency.

5. The disinfecting value of *ultra-violet light* is still a matter of dispute, chiefly due to the variation in sources, intensities, and the quality of contaminated surfaces.

It seems probable that direct sunlight is the best form, but that it is bacteriocidal only on surfaces ( $\frac{1}{2}$  an hour is said to be sufficient). However, the effect beneath the surface, the effect of indirect or filtered sunlight, simple daylight, and of ultra-violet lamps are either much less satisfactory or still uncertain. Tubercle bacilli in the air are said to be killed in 3 seconds by ultra-violet light.

Smith found no bacilli in the dust from rooms of patients with indirect sunlight and good ventilation<sup>12</sup> (California). These factors should be even more of a protection in Arizona, though they should never be used as an excuse to skimp or skip other methods.

Protection of animals from contact infection by the use of ultra-violet lights has been reported,<sup>14</sup> but its value has not been assayed for humans, though work is in progress.

#### *New and Valuable Methods*

There are several methods and materials which have only recently been proved valuable and put into use. They may not be widely known, and can be emphasized here. The use of *oil to reduce the dust*, and the use of *alcohol as an antiseptic* are the most notable. Other methods have already been mentioned.

1. The use of *oil on floors and bedding* was suggested only a few years ago, as an aid in control of air-borne diseases,<sup>15</sup> and seemed logical but vaguely messy. Since then it has been proved feasible, has been experimentally effective in reducing the bacterial flora in rooms, has reduced the incidence of coecal diseases in army barracks, and has received a trial in tuberculosis units.<sup>15, 16, 17, 18</sup>

Actually only one sanatorium is known to use

the method regularly. Jennings reports, after two years of use,<sup>16</sup> that it results in the absence of visible dust; no slipperiness of the floor; and no irritation or discomfort from the blankets or sheets. The patients do not know that it is in use. Probably it must be used empirically, since the testing of an oiled material or surface would be even more difficult than testing an unoiled surface.

The action of oil as a bacteriostatic has been mentioned but not proved.

Floors are oiled by the use of an oil-treated sawdust. A pale paraffin oil (commercial) is mixed with sawdust in the proportion of about 3 gallons to 100 pounds. If the sawdust is very dry, more oil may be added. The material commonly used for *bedclothes* is called "T-13," which is 13% of a complex higher alcohol and 87% of medicinal mineral oil combined in a stable emulsion form. It is applied during the last rinse, in the proportion of 2.4 quarts of T-13 to 25-30 gallons of water during the first washing; for subsequent washings only 5% of the original amount of oil need be used.<sup>7, 17, 18</sup> This will remain on blankets for months, and on bed-linen through two or three washings. Oiling would seem to be a wise addition to the technic, and a possible answer to the droplet and dust problem. Its use would not be entirely inconsistent with the use of vacuum cleaners, which can be useful on ledges, drapes, and screens as well as floors.

2. *Alcohol* has been used in tuberculosis care for years, but without the assurance of satisfactory experimental work. In 1947 Smith thoroughly tested various strengths of both ethyl and isopropyl alcohol on wet and dry sputum preparations of tubercle bacilli.<sup>19</sup> The conditions were probably more stringent than would be met clinically.

The results showed that tubercle bacilli are very sensitive to alcohol, and that it is a very good antiseptic. Certain strengths are more effective than others, under certain circumstances. *Ethyl alcohol*, 95%, is bacteriocidal in 15 to 30 seconds against wet bacilli; 50% is more effective against dry smears; and 70% is probably the best all-purpose dilution. *Isopropyl* (common rubbing alcohol) is as effective as ethyl, and even more so in the 50% to 70% dilutions. The amount of sputum substrate did not appreciably delay the action, and most of the bacilli were killed in the first few seconds.

Practically, both 70% ethyl alcohol and the less expensive 50-70% rubbing alcohol may be used with confidence on dry hands, or just after they have been washed. The alcohol should be applied, and allowed to dry during the subsequent 30 to 60 seconds. This means that personnel members may use it at the washstand, and *patients may use it at the bedside*—a valuable addition to the technic. A hand lotion may be applied after the alcohol in people who must use it many times a day. Alcohol may also be used on rubber gloves, small objects or surfaces, and in thermometer containers. There is no residue, and no repelling odor.

#### Summary and Conclusions

1. There is an increasing need for an efficient routine of aseptic precautions in the care of tuberculosis. More cases are being discovered, more patients are being hospitalized, the hazard of unprotected contact is well-recognized, and the value of protection has been proved.
2. A critical analysis of the programs which have been recommended indicates that:
  - a. The majority of methods and materials are good. They are logical, efficient, and can be easily applied.
  - b. There are several new procedures, not generally in use, which are very valuable.
  - c. There are a few methods and materials which need to be further investigated before they can be recommended. These flaws could easily be repaired. Organized research should be applied at once to this aspect of the tuberculosis control program. It would not be costly.
  - d. A limited and incomplete application is the greatest deficiency which has been noted. A correction should not wait until perfection of the precautions; it should be made now, in every hospital and sanatorium, and pushed to wide usage in the care of patients at home.

#### REFERENCES

1. Arestad, F. H.; Leveroos, E. H.; Albus, W. R., and Corbett, W. W.: Hospital Service in the United States. J.A.M.A. 137:1365, Aug. 14, 1948.
2. Cady, Louise L.: Nursing in Tuberculosis (Text, Saunders Co., Phila. 1st ed. 1948).
3. Longhurst, Grace M.: Tuberculosis Nursing (Text, F. A. Davis & Co., Phila., 2nd ed., 1947).
4. Hetherington, H. W., and Eshleman, F.: Nursing in Prevention and Control of Tuberculosis (Text, C. P. Putnam's Sons, 2nd ed., 1945).
5. Myers, J. A.: Are Nurses and Physicians Protected Against Tuberculosis? Trained Nurses & Hosp. Rev. 91:416, 1933; and West, C.; Schaller, L., and Myers, J. A.: There Is No Excuse for Tuberculous Infection. Mod. Hosp. 59:75, 1942.
6. Oatway, W. H. Jr.: The Management of Tuberculosis in General Hospitals (Manual for the American Hospital Assn., Council on Professional Practice, 2nd ed., 1946). Am. Hosp. Assn., 18 E. Division St., Chicago, 10, Illinois.

7. Amberson, Katherine G.: Safer Ways in Nursing to Protect Against Tuberculosis (Outline for the Joint Tuberculosis Nursing Advisory Service, just published in 1948) Nat'l. Tuberculosis Assn., 1790 Broadway, New York, 19, N. Y.
8. Veterans Administration, Technical Bulletin: Precautionary Measures—Aseptic Technique. (TB 10A-138), 1946; Basic Principles of Aseptic Technique. (Manual M 10-2), Mar. 30, 1946.
9. Myers, J. A.; Boynton, R. E., and Diehl, H. S.: Prevention of Tuberculosis Among Students of Nursing. *Am. J. Nursing*, 47:1, Oct. 1947.
10. Oakway, W. H. Jr., and Stiehm, R. H.: Don't Put Off Till Tomorrow, (Tuberculosis Case-Finding in a Large Teaching General Hospital), *Modern Hospitals*, Oct. 1945.
11. Rooks, R.; Cralley, I. J., and Barnes, M. N.: Hospital Masks, Their Bacterial Filtering Efficiency and Resistance to Air Flow, *U. S. Public Health Rep.* 56:1411, July, 1941.
12. Smith, C. R.; Urabec, J. D., and Mason, J. L.: Air-borne Infection in Tuberculosis, *Calif. Med. (Tb. Suppl.)*, August 1946.
13. Lurie, M. B., and Abramson, S.: Preliminary Report on Efficiency of Gauze Masks in Protection Against the Inhalation of Droplet Nuclei of Tubercle Bacilli, *Nursing Conference, Nat'l. Tuberculosis Assn.*, Meeting New York City, June 14, 1946.
14. Editorial: Air-Borne Tuberculosis (with references to results of Perlis, Lurie, and Wells and Lurie). *J.A.M.A.* 126:707, Nov. 11, 1944.
15. Fuck, T. T.; Robertson, O. H.; Wise, H.; Loosli, C. G., and Lemon, H. N.: The Oil Treatment of Bed Clothes for the Control of Dust-borne Infection, Parts I and II, *Am. J. Hyg.* 43:91 & 105, Mar. 1946; Study of the Effect of Oiled Floors and Bedding on the Incidence of Respiratory Disease in New Recruits, *Ibid.*, p. 120.
16. Jennings, P. L. (Supt. and Med. Dir., Sunnyside San. Indianapolis, Ind.)—personal communication.
17. Normile, H. C. (Laundry Technologist, Vets. Admin.): For Dust Control, *Hospitals*, May 1948.
18. Veterans Administration: (Information Bulletin No. 111-104): Treatment of Bed Clothing with T-13 Oil Emulsion, Mar. 6, 1948.
19. Smith, C. R.: Alcohol as a Disinfectant Against Tubercle Bacilli, *U. S. Public Health Rep.* 62:1285, Sept. 5, 1947.
20. McCulloch, E. C.: Disinfection and Sterilization (Text, Lea and Febiger, 2nd ed., 1945); and Charts of Klarmann, and Klarmann & Shternov, p. 314.
21. American Institute of Laundering: Washing Formula (Techn. Bul. No. 34); and The Sanitary Aspects of Commercial Laundering (Techn. Bul. No. 53).
22. Klarmann, E. G.: Personal communication concerning effect of Lysol, etc., on the tubercle bacillus.
23. Klarmann, E. G.: Personal communication concerning cresol and phenol antiseptics.
24. Smith, C. R.: Personal communication concerning cresols and phenol antiseptics.
25. Public Health Service (Federal Security Agency), Tuberculosis Control Division: Tuberculosis Beds in Hospitals and Sanatoria, United States and Territories, January 1, 1948.

## Q FEVER

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THE Q of Q fever stands for Question mark or query, not as so frequently mis-stated for Queensland. Derrick recognized that an epidemic disease which he was investigating in Brisbane, Australia, in 1933 was something different, and he marked the material set aside for future investigation with a question mark, and so it came ultimately to be known as Q fever.

Burnet and Freeman isolated the causative factor in 1937 and classified it with the rickettsia. In 1938, in Montana, Davis and Cox recovered a similar organism, which they called *R. diaporica*, which was soon shown to be identical with the Australian organism and both were labelled *R. burneti*.

However, *R. burneti* differed from other members of the rickettsia family. It grew extra-cellularly; it passed through Berkfeld N and W filters, though not through a single Seitz disc; and it would not react with the proteus group in any Weil-Felix reaction. For these and other reasons it was decided that it belonged to a new and separate genus and the name *Coxiella burneti* was decided upon, and it is so listed in the current edition of Bergey's Manual of Determinative Bacteriology.

Cases have been recognized, either sporadically or in epidemics, in Australia, widely separated parts of the United States, Panama, Switzer-

land, the Balkans, and in the Mediterranean area.

Cattle represent the animal reservoir. The exact mode of spread requires further verification, but dust contaminated by manure particles or urine appears to transmit the disease. The role of insects, if great, is not apparent. The same applies to raw milk in endemic areas, for while large supplies have been proven to contain *C. burneti*, the incidence of infection in the human in the communities drinking large supplies of such milk has remained too low to be explained on this basis. The final answers are not in. Dairymen, meat handlers, and those living in close proximity to dairies are most frequently infected and account for over 70 per cent of the cases seen in Los Angeles County.

The incubation period is said to vary from two to three weeks, but I believe it to be much shorter. The onset is abrupt with headache, pain back of the eyes, fever and chills, generalized muscular aching, anorexia, indigestion, and marked weakness.

Headache is usually severe, and the retro-orbital pain accompanying it is made much worse by movement of the eyes, often reminding one of dengue. At times it is insignificant.

True rigor has been common in the cases seen in Los Angeles. It occurs several times a day and is followed by profuse sweating. While chilliness has been stated to be more frequent, true chills occur much oftener than published articles on the subject would indicate.

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Mild photophobia for the first day or two may be present—occasionally requiring dark glasses. "Indigestion" with anorexia and a sense of excessive fullness in the abdomen with no apparent distention is frequently present. The spleen is rarely enlarged, and practically never present in those cases which have been identified in Southern California, although it is reported to have been enlarged more frequently in Central and Northern California, in which areas sheep and goats seem to be additional reservoirs. Hepatomegaly was also observed in Northern California.

Muscular aches and pains are common. Pain in the chest, ranging from a sense of constant oppression or a dull continuous ache to sharp pain on deep breathing, occurs in one-half the cases. This chest pain has been as constantly seen in those without any clinical or x-ray respiratory signs, as it has in those with concurrent bronchitis or pneumonic infiltration. The white blood count has usually been normal or slightly elevated. Plasma cells occur late in the disease and have been mistaken for the Downey cells of infectious mononucleosis.

The majority of cases have a dry or productive cough by the fifth day, and the roentgenogram demonstrates a patchy consolidation, usually present only in one lobe, which is very similar to the hazy ground glass appearance of primary atypical pneumonia and, like that disease, tends to remain visible long after all the symptoms are gone.

All of the physical findings of Q fever, when accompanied by chest involvement (about 80 per cent), are those which we are accustomed to accept as indicating primary atypical pneumonia. The nose and throat membranes are slightly congested. Sore throat, coryza and rhinitis are minimal. The temperature ranges from 98° to 105°F—it is highest after a chill, and is a septic or swinging type; the pulse tends to be disproportionately low as in brucellosis or typhoid fever, but it is not dicrotic.

The chest signs develop later than the x-ray signs and usually are not apparent early, being recognized after several days of the illness. They vary from fine rales heard best at the end of inspiration to slightly suppressed breath sounds and dullness over a pneumonic patch. An occasional friction rub occurs and when present, tends to persist longer than the other changes which usually last a day or two, but they may

persist for two or three weeks. There is no correlation between the amount of pulmonary involvement shown in the diagnostic x-ray film and the severity of the clinical picture. In fact, in the cases with lung involvement, I cannot differentiate Q fever from primary atypical pneumonia except by laboratory methods, although early frequent chills are always in favor of Q fever.

An occasional maculo-papular rash occurs over the trunk.

The course varies from the mildly ill ambulatory patient which recovers within a day or two, to the severely ill patient requiring hospitalization for a month or longer, but the average duration is seven to ten days. Unresolved pulmonary areas may be seen by fluoroscopy for weeks after the onset.

The differential diagnosis must include primary atypical pneumonia, infectious mononucleosis, brucellosis, influenza, the other pneumonias, and at times the more rare conditions such as psittacosis or the fungous diseases.

The diagnosis may be suspected in time of epidemic, such as occurred in Southern California last year where certain focal areas were principally affected, yet the diagnosis can only be established by laboratory tests. In this connection, it should be pointed out that in rickettsial and viral infections as well as Q fever, two specimens of blood are required for serological diagnosis: one is taken early, and one or more taken later in the disease or during convalescence to establish rising titers. Specific antibodies are either absent, or present in very low titer, early in these diseases: the final diagnosis hinges upon either their initial appearance, or an increase in the titer as the disease progresses.

#### TREATMENT

We first treated a case of Q fever, one of the pneumonic type, with streptomycin in May 1947. Within 48 hours the fever started to drop and after four days the temperature was normal. He made an uneventful recovery. Since that time we have treated six other patients with equally good results. The dose has varied between two and three grams in 24 hours during the febrile period, and 1 to 2 grams for the next two to four days. The doses have been divided into six parts given every four hours intramuscularly.

We, as well as others, have treated cases with the duomycin brand of aureomycin, giving a

close every four hours, for eight to 10 days, basing the total daily amount upon 50 mg per kilogram of the patient's weight. This drug comes in 250 mg. capsules. The balance of the treatment is entirely supportive.

Aureomycin is specific for Q fever and so far, has produced no untoward side reactions other than occasional nausea and vomiting. An additional advantage is its oral administration. A disadvantage is its very high price, which will soon come down to reasonable levels.

The death rate is very low and prognosis good.

### EPIDEMIOLOGY

To date over 400 cases of Q fever are known to have occurred in California since 1946; over one-half of them were in Southern California, and practically all of these were in the dairying county of Los Angeles. The oldest case was 75 years of age and the youngest three years. It occurred four times as often in males as in females, and most were in dairy and packing house workers.

Cox either found the antibodies present or recovered the organism from 19 patients from Nebraska, Wyoming, Montana, Idaho, Washington, Oregon, and Nevada. It has likewise been identified in Illinois, Texas, Virginia, Washington, D. C., and Pennsylvania.

The Australian investigators believe that in Australia the disease in man represents an accidental infection presumably acquired through inhaling dust containing tick excreta from cow hides. They believe the cycle in nature is maintained by ticks acting as the vector of the virus from a primary marsupial host, known as a bandicoot, to cattle. This would explain the high incidence among those who work around cattle and indicates that human infections occur through the inhalation of air-borne infected dust. However, some other primary host than bandicoots will have to be incriminated, and in California, first cattle, and then goats and sheep appear to be the original sources from which man is infected.

When Huebner, Shepard, and Bell tested many herds and random milk samples in Los Angeles County, practically every herd was found infected and a large proportion of raw milk samples produced the disease when injected into guinea pigs. Infected cattle are not inconvenienced, and do not show evidence of being diseased.

It is evident that Q fever is no longer to be considered an exotic disease, but is endemic over large areas of the nation, and at times epidemic. It will probably remain with us permanently and require consideration in the differential diagnosis of many obscure fevers, especially those accompanied by retro-orbital pain, photophobia, severe chills, and evidence of lung involvement with normal or slightly elevated white blood counts.

### SUMMARY

1. Q fever is a new clinical entity in our daily practice, though probably formerly present but unrecognized. It is widely distributed in this country.
2. It may be proven by complement fixation after the first 10 days.
3. It is amenable to therapy with aureomycin or streptomycin.
4. It is primarily a disease of cattle.
5. It is spread through urine or manure-contaminated dust or from raw milk.

### REFERENCES

1. Bengtson, I. A.: Immunological Relationships between the rickettsiae of Australian and American Q fever. *Pub. H. Rep.* 56:272 (Feb. 14) 1941.
2. Bergey, D. H.: A manual of determinative bacteriology. The Williams and Wilkie Co., Baltimore, 1948, 6th Ed., 1092.
3. Burnet, F. M., and Freeman, Mavis: Experimental Studies on the virus of "Q" fever. *Med. J. Australia.* 2:299 (Aug. 21), 1937.
4. Burnet, F. M., and Freeman, Mavis: A comparative study of rickettsial strains from an infection of ticks in Montana (United States of America) and from Q fever. *Med. J. Australia.* 2:887 (Dec. 16), 1939.
5. Cheney, Garnett: The identification of Q fever in Panama. *Am. J. Hyg.* 44:158 (July), 1946.
6. Commission on Acute Respiratory Diseases: Epidemics of Q fever among troops returning from Italy in the spring of 1945. II Epidemiological studies. *Am. J. Hyg.* 44:38 (July), 1946.
7. Commission on Acute Respiratory Diseases: Identification and characteristics of the Balkan grippé strain of Rickettsia burneti. *Am. J. Hyg.* 44:110 (July), 1946.
8. Commission on Acute Respiratory Diseases: A laboratory outbreak of Q fever caused by the Balkan grippé strain of Rickettsia burneti. *Am. J. Hyg.* 44:123 (July), 1946.
9. Cox, Herald R.: Rickettsia diaporica and American Q fever. *Am. J. Trop. Med.* 20:463 (July), 1940.
10. Davis, Gordon E.: Rickettsia diaporica: Recovery of three strains from Dermacentor andersoni collected in South-eastern Wyoming: Their identity with Montana Strain I. *Pub. Health Rep.* 54:1 (Dec. 15), 1939.
11. Derrick, E. H.: "Q" fever, a new fever entity: Clinical features, diagnosis and laboratory investigation. *Med. J. Australia.* 2:281 (Aug. 21), 1937.
12. Derrick, E. H.: Rickettsia burneti: The cause of "Q" fever. *Med. J. Australia.* 1:14 (Jan. 7), 1939.
13. Dyer, R. E.: A filter-passing infectious agent isolated from ticks. IV Human infection. *Pub. Health Rep.* 53:2277 (Dec. 30), 1938.
14. Dyer, R. E.: Similarity of Australian Q fever and a disease caused by an infectious agent isolated from ticks in Montana. *Pub. Health Rep.* 54:1229 (July 7), 1939.
15. Feinstein, Marcus, Yenser, Raymond, and Marks, Jerome L.: Epidemics of Q fever among troops returning from Italy in the spring of 1945. I. Clinical aspects of the epidemic at Camp Patrick Henry, Virginia. *Am. J. Hyg.* 44:72 (July), 1946.
16. Osell, O.: Pneumonias Rickettsia burneti. *Med. et Hyg.* 108:317 (Oct.), 1947.
17. Hornbrook, J. W., and Nelson, K. R.: An institutional outbreak of pneumonitis. I. Epidemiological and clinical studies. *Pub. Health Rep.* 55:1936 (Oct. 25), 1940.
18. Huebner, R. J.; Jellison, W. L.; Beck, M. D.; Parker, K. F., and Shepard, C. C.: Q fever studies in Southern California. *Pub. Health Rep.* 63:214 (Feb. 13), 1948.
19. Huebner, Robert J.; Hotte, G. A., and Robinson, Eleanor B.: Action of streptomycin in experimental infection with Q fever. *Pub. Health Rep.* 63:357 (March 19), 1948.
20. Janton, O. H., et al.: Q fever: Report of a case in Pennsylvania. *Am. Int. Med.* 30:1 (Jan.), 1949.



21. Leunette, E. H.: Q fever in California. *Calif. Med.*, 69:2 (Aug.), 1948.
22. Leunette, E. H., and Meiklejohn, G.: Q fever in Central and Northern California. *Calif. Med.*, 69:3 (Sept.), 1948.
23. Parker, R. R., and Kohls, Glen M.: American Q fever: The occurrence of *Rickettsia diaporica* in *Amblyomma americanum* in eastern Texas. *Pub. Health Rep.*, 58:1510 (Oct. 8), 1943.
24. Philip, Cornelius B.: Comments on the name of Q fever organism. *Pub. Health Rep.*, 63:58 (Jan. 9), 1948.
25. Robbins, Frederick C.; Gauld, Ross L.; and Warner, Frank B.: Q fever in the Mediterranean area: Report of its occurrence in allied troops. II. Epidemiology. *Am. J. Hyg.*, 54:23 (July), 1946.
26. Rosove, L.; West, H. E., and Bower, A. O.: Q fever case
27. Shepard, Charles C.: An outbreak of Q fever in a Chicago packing house. *Am. J. Hyg.*, 46:185 (Sept.), 1947.
28. Smith, D. J. W., and Derrick, E. H.: The isolation of six strains of *Rickettsia burneti* from the tick *Haemaphysalis humerosa*. *Australian J. Exp. Biol. and Med. Sci.*, 18:1 (March), 1940.
29. Topping, Norman H.; Shepard, Charles C., and Irons, J. V.: Q fever in the United States. I. Epidemiologic studies of an outbreak among stock handlers and slaughterhouse workers. *J. Am. Med. Assn.*, 133:313 (March 22), 1947.
30. Topping, Norman H., and Shepard, Charles C.: The preparation of antigens from yolk sacs infected with rickettsiae. *Pub. Health Rep.*, 61:701 (May 17), 1946.
31. Young, F. W.: Q fever in Artesia, California. *Calif. Med.*, treated with streptomycin. *Am. Int. Med.*, 28:6 (June) 1948. 69:3 (Sept.), 1948.

## CARDIOVASCULAR EPISTAXIS

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EPISTAXIS occurs frequently in the Southwest due to the high altitude and dry climate of this region. We rarely see severe nose bleeds during office hours, the family usually calling at night, saying the patient has been having a nose bleed all day and that they are afraid to go through the night without medical aid. In the cardiovascular type of epistaxis the physician usually reaches the house to find the patient bleeding profusely and surrounded by several anxious members of the family.

Experience has shown that any bleeding coming from the medial side of the nasal chamber (the septum) can be controlled satisfactorily by tightly packing and cauterizing. Fibrofoam or one of the coagulants are preferred by some and work quite well. The most disturbing site of epistaxis comes from the lateral side of the nose and there is one location seen in patients with cardiovascular sclerosis that we wish to discuss. Woodruff<sup>1</sup> was the first to draw attention to this particular location. He stated that 75% of nose bleeds came from the anterior part of the nasal septum and 25% from the lateral side of the nose. Bleeding from this site should be labeled a nasal hemorrhage rather than an epistaxis, for such it is.

In the ordinary nose bleed the patient is not in any acute danger as the bleeding point will eventually clot when the blood pressure gets low enough. However, in the hemorrhage from the inferior lateral branch of the sphenopalatine artery the blood loss is acute and the patient may bleed to death. Blood pours from both sides of the nose and runs backward into the throat so that the individual may spit and vomit blood. Fortunately, this is not a very common form of nose bleed. A summary will be given of several of these cases seen during the last five

years, two of which had to have a ligation of the external carotid artery. It is comforting to know that if one cannot control a hemorrhage by packing, ligation of the external carotid artery will certainly take care of the situation. The ligation may be done under local or pentothal anesthesia. It requires skill on the part of the surgeon and a thorough knowledge of the anatomy of the neck. However, it is attended by very little reaction or shock and few complications. It is well to leave the nose pack in place for 24 hours after the ligation and then to remove it gradually. The patient may leave the hospital as soon as the packing is out of the nose. Penicillin is a desirable adjunct to prompt healing of the incision in the neck.

In order to locate exactly the site of the cardiovascular type of nasal hemorrhage, the blood supply of the nose will be briefly described. The arterial supply of the nose comes from the internal and external carotid arteries. The internal carotid artery gives off the ophthalmic branch which in turn divides into the anterior and posterior ethmoidal arteries. These divide into internal and lateral branches supplying the upper part of the nasal vestibule. Bleeding from this source is not frequent except in fractures of the nose or malignant growths. The anterior portion of the nose is supplied by the superior labial, lateral nasal and palatine arteries and bleeding from these vessels is not difficult to control. The sphenopalatine artery is most important and will be described. It arises from the internal maxillary artery which in turn is a branch of the external carotid artery. The sphenopalatine artery supplies the lower posterior part of the nasal chamber by dividing into medial and lateral branches. The lateral branch gives off a large artery—the inferior lateral

sphenopalatine artery—and it is from this artery that the cardiovascular patient is most apt to bleed. This artery is actually the continuation of the main sphenopalatine after it has given off its lesser branches. The vessel curves around the posterior end of the inferior turbinate and comes forward high up under the attachment of the turbinate. The artery is very superficial just under the posterior end of the inferior turbinate, being covered only by mucous membrane. This probably accounts for its rupture at this particular location when the blood pressure is elevated and the vessel wall is weakened by sclerosis.

All of the individuals seen with this type of hemorrhage have been 50 to 80 years of age and have had considerable arteriosclerosis; some had excessively high blood pressure and some moderate hypertension. Bleeding from this location is a bad prognostic sign as it usually indicates progressive degeneration of the cardiovascular system. All of the patients have had generalized cardiovascular sclerosis as evidenced by (1) hypertension, (2) retinal arteriosclerosis, (3) chronic myocarditis, (4) poor renal function, and (5) inadequate peripheral circulation. These five conditions have not been present in every patient. However, after a patient suffers a profuse hemorrhage from the inferior lateral sphenopalatine artery, the physician must be on guard against some cardiovascular accident which may happen to the patient at an early date.

Many different methods for control of this particular type of hemorrhage have been tried, such as: (1) Cauterization, (2) packs of Fibrofoam and all kinds of coagulating substances, (3) any and all kinds of injections and medication by mouth, (4) inflation of the nasal chamber with a rubber bag filled with air, and (5) gauze and cotton packing. After trying all of these the following procedure was found preferable:

The patient is instructed to sit erect in a straight chair with a large wash basin in his lap and is covered with a rubber sheet. The best illumination possible is reflected into the nose from a head mirror. When the patient is in the office or the hospital, a suction tip is used to cleanse the nasal chambers. Otherwise, the patient is allowed to blow his nose forcibly several times and draw back into the throat to clear all clots out of the nose. Bleeding is always coming from both sides as it runs around into the oppo-

site side from the posterior nares. However, the patient can always state which side began to bleed first. The nasal chamber is sprayed several times with a solution of 2% ephedrine and 1% cocaine and the patient is asked to draw this through the back part of the nose and expectorate. A large pack is saturated with the same solution and placed under the posterior end of the inferior turbinate, leaving it in place for several minutes. This usually diminishes the flow somewhat. Five to ten nasal packs about the width and breadth of the index finger are made with long fiber cotton, saturated in peroxide solution, and squeezed as dry as possible. The cocaine and ephedrine pack is removed. Then the first peroxide pack is placed on the floor of the nose posteriorly, rolled under the posterior end of the inferior turbinate and packed up under the turbinate with all the force possible. The next pack is placed beside the first and the succeeding packs are placed similarly until the inferior meatus is filled. The packs are all put in as tightly as possible. A light pack saturated with oil is then placed in the upper part of the nasal chamber to keep the lower packs from slipping and working up.

This procedure is painful so usually a hypodermic injection of pantopon and atropine is given as soon as possible. By this time there should be no bleeding from the anterior nares. Finally, the throat is examined to see that there is no more dripping of blood into the nasopharynx. If any blood is seen in the throat, the packing has not controlled the bleeding and the force of the blood pressure will soon loosen the whole pack. The peroxide packs work well because the peroxide draws moisture from the nose into the pack causing it to swell and become tighter and tighter. This pack is uncomfortable but most of the patients prefer the discomfort to the bleeding. The patient is given enough sedation to put him to sleep in a sitting position with his head propped up on several pillows or sitting in a large comfortable armchair.

This pack may be left in place four or five days, and then taken out one piece at a time. Ten cubic centimeters of blood taken from the patient's arm may be injected into the buttocks. Oral medication may include Synkamin, Vitamin C, Ceanothyn and Calcium, but sedatives are the most beneficial medication, orally or by injection. After the packs have been removed and the bleeding area has healed, the patient is in-

structed to spray his nose with a mild oily spray for several weeks until all the mucoid discharge ceases. Often these people have to be transfused and it is preferable to do this while the pack is still in the nose. From the beginning of the hemorrhage it usually takes ten days to two weeks before one can be sure the bleeding area has healed.

When the patient has been through several such hemorrhagic episodes, ligation of the external carotid artery should be done. Of the ten cases to be enumerated, two had such ligation with prompt control of bleeding. When there is marked deviation of the septum or a septal ridge in the side of the nose that is bleeding, a situation is presented which can usually be controlled only by ligation of the external carotid. The structure of the nose in such a case makes it almost impossible to pack under the inferior turbinate.

#### REPORTS OF CASES

1. C. S., male, aged 54, entered St. Mary's Hospital, January 12, 1943, with a profuse nasal hemorrhage. Bleeding was controlled by packing. The blood pressure was 200/115. The packing was left in place four or five days. This patient has not had any nasal hemorrhage since but he has had an intracranial hemorrhage and is now bedfast.

2. H. K., male, aged 65, came to the office June 10, 1945, with profuse epistaxis. The blood pressure was 192/120. Bleeding was controlled by packing. The patient was referred to a physician in his own neighborhood to have the packing removed. Six months later this patient died in his sleep.

3. S. H., male, aged 55, called me to see him at his home during the night of March 6, 1944. He was having a profuse nasal hemorrhage. This was controlled by packing and remained under control for two days when he had another profuse hemorrhage through the packing. The blood pressure was 164/110. The patient was hospitalized, the nose was repacked, and a transfusion was given. After being in the hospital two weeks, he was discharged with the nasal hemorrhage under control. He returned to his home in the Middle West and three months later died suddenly of a coronary thrombosis.

4. S. W., male, aged 69, called me to the hospital to see him Christmas day, 1946. The blood pressure was 176/98. Hemorrhage was controlled by packing and after 24 hours the patient was allowed to go home. There was considerable seepage through the packing for three or four days. Seepage then ceased and the packing was removed, one piece at a time. On October 24, 1947, the patient had a blood pressure

of 192/116. He has pronounced retinal arteriosclerosis and is beginning to lose some vision.

5. J. C., male, aged 65, came to the office January 3, 1939. The blood pressure was 198/130. Bleeding was controlled by packing. He had a recurrence on December 11, 1944, when his blood pressure was 230/135. He was hospitalized for a week and has been seen once since with a minor hemorrhage from the same location.

6. E. H., male, aged 85, called me to his home on May 5, 1945. A severe epistaxis was controlled by packing. Although this patient had a normal blood pressure, he had an advanced generalized arteriosclerosis. He had several attacks of epistaxis with severe bleeding, all of which were controlled by packing. He died June 17, 1946, of an acute heart attack.

7. R. F., male, aged 60, came to the office February 3, 1937. The blood pressure was 160/84. He had arthritis as well as generalized arteriosclerosis and chronic fibroid tuberculosis (inactive). He had a profuse nasal hemorrhage which was controlled by packing in the hospital. He was discharged from the hospital in one week. Later he had another profuse hemorrhage which was not controlled by packing. He was advised to have ligation of the left external carotid artery. This was done under local anesthesia on February 20, 1947. The next morning the packing was removed from the nose and several days later the patient was discharged from the hospital. He returned to his home in the East, and, as far as is known, he is still alive.

8. J. C., male, aged 74, came to the office on December 12, 1947. The blood pressure was 200/130. Bleeding was controlled by precision packing which was removed in four or five days. The patient has not had a recurrence since, to our knowledge.

9. L. F., male, aged 50, came to the office October 31, 1947, with a severe nose bleed. The blood pressure was 148/96. Bleeding was controlled by precision packing. The same night the patient had a recurrence through the packing. The packing was renewed on several occasions but the bleeding continued. He was advised to have a ligation of the external carotid and this was done on November 3, 1947. The packing was removed from the nose two days later. The patient has had no recurrence of nose bleeds.

10. D. M., female, aged 56, called me to the house on February 11, 1944. She was having a very profuse nasal hemorrhage from the right side which was controlled by packing. The blood pressure was 154/86. During the summer of 1944 in Iowa she had a similar hemorrhage which was controlled by a local physician by packing. On October 5, 1945, when she had returned to Tucson, she had another profuse nasal hemorrhage which was controlled by packing. On Christmas eve of 1945 she again had a profuse hemorrhage which was controlled by



packing. On January 27, 1946, the same condition recurred. Since then she has had no recurrence. She has a moderate hypertension and generalized arteriosclerosis. Should this patient have another hemorrhage, she should certainly have a ligation of the external carotid artery.

#### SUMMARY

Ten cases of cardiovascular epistaxis have been reported. Ligation of the external carotid artery was done in two patients. Three patients were dead from a cardiovascular accident within a short time, one suffered a cerebral hemorrhage and became bedfast, and all ten had evi-

dence of advanced cardiovascular disease. Troublesome cases can be controlled by ligation of the external carotid artery which, in competent surgical hands, is not a major procedure. Experience has shown that this particular type of epistaxis in this one location is a bad prognostic sign as it indicates advanced degeneration of the cardiovascular system.

130 So. Scott

#### REFERENCES

1. Woodruff, G. H.: Nasal Hemorrhage in Hypertension and Arteriosclerosis, *Diseases of Eye, Ear, Nose and Throat*, Nov., 1942, 336-339.

## Arizona Medical Problems CONSULTATION AND CASE ANALYSIS

**ARIZONA MEDICINE** again presents an unsolved and difficult case from the practice of Arizona physicians, with the Case-Analysis and comments of a specially-chosen and nationally-known Consultant.

Any physician who has an undiagnosed case which has defied other methods of solution may send it for consideration. The case should be completely worked up, but an editor will help compose the report. Whenever the need for an answer is urgent, the Consultant's reply will be sent direct to the submitting physician, before publication.

Please send communications and data to Dr. W. H. Oatway, Jr., 123 S. Stone Avenue, Tucson, Arizona, or care of The Editor, Arizona Medicine.

The CONSULTANT for the current case is Dr. R. B. Raney, neurosurgeon of Los Angeles. Dr. Raney is known to many Arizonans, having practiced in Phoenix, having spoken at Arizona medical meetings, and having consulted in numerous cases which have been sent to him.

Dr. Raney is Associate Professor of Neurosurgery at the University of Southern California School of Medicine, a member of the Harvey Cushing Society, the American Neurologic Association, the American Academy of Neurological Surgery, Fellow of the American College of Surgeons, and Diplomate of the American Board of Neurological Surgery.

#### CASE NUMBER XV

The patient is a colored female housewife, 27 years of age. She was a native of Arkansas, graduated from college, taught school in Louisiana, has been married five years, and moved to Arizona three years ago.

Three weeks ago she came to the present physician with a complaint of headache.

She was well until two months before then, at which time she noted an occasional dull, mild pain in the left temporal and posterior auricular areas. A few weeks later she was forced to quit a job as attendant because the work seemed too heavy. For the past two weeks the pain had become more severe, and occurred every hour or so, day and night, for periods of five minutes. There was no history of nausea, vomiting, ear lesion, sinus infection, difficulty with the teeth, nor injury. She had noted vertigo several times, and fell once.

The patient also noted difficulty in concentration, was unable to find words to use in conversation and while reading. Her husband stated that she sometimes slurred words, and that he believed that her left eye has been "swollen" for the past two weeks. She had no photophobia or visual trouble, but believed that she was slightly deaf on the left, and had put cotton in her ears to lessen the headache. There were no cardiac, respiratory, genito-urinary, intestinal, nor bone and joint symptoms.

The past medical, family, and social history were not remarkable. Her blood Wassermann test was negative last year.

The patient had previously seen another physician, who had found the sinuses normal by x-ray, and failed to clear her symptoms with pills. He sent her to an ophthalmologist, who found her eyes to be normal, and to a dentist who found her teeth in good condition. The ocular tension was normal at 17.

On examination she was seen to be tall, and thin, and the mucous membranes were pale. She was mentally sluggish, failed to follow the questions, searched for words, slurred words, used wrong words, failed to finish sentences, and repeated syllables. The temperature was normal;

the pulse was regular at 60/min; and the weight was 127 (compared to a normal of 135).

There was a **possible slight protrusion of the left eye**, and it would not converge, though other movements seemed normal. The fundi were not seen clearly, and there was a questionable choking. There was no deafness. The facial and other muscle function was normal, but the deep reflexes on the left arm were slightly hyperactive. The Romberg sign was negative, though she swayed from weakness. The other systems were normal, as was a fluoroscopy of the chest.

The patient **tended to dramatize her symptoms** somewhat, which added an extra factor to be estimated.

A **tentative impression** of brain tumor in the left cerebral area was made, with a luetic basal meningitis and a neurosis to be considered. It was decided to try medication, and arrange to check the eye-grounds, blood serology, and spinal fluid.

**Three days later** she was seen again. The **headache had been relieved** at once by codeine and amidophen, and had been gone most of the time since. The speech difficulty was much less, but the eye-signs were the same, and there was definitely no choking of the discs. The **lumbar-puncture** findings were entirely **normal**, and the blood Kahn, Kolmer, and Kline tests were negative.

On further questioning, the "swelling" of the left eye was said to have occurred when she attended meetings as long as one and two years previously. It was considered that a **large functional element was present**, and further observation was justified. (The patient's home situation seemed to be very satisfactory, though somewhat emotional. The marital relationship was happy, though the patient wanted to have a child.)

**During the next ten days** her general feeling and strength improved. She needed codeine only three times, with the pain being mild and limited to the left parietal area and around the left eye and in the left ear. Her speech was improved. She had gotten over a cold, and had had a normal menses. The fundi were normal, the eye (and other) reflexes were normal, and the left ocular movement was improved.

**A few days later** (three weeks after she was first seen) the husband called to say that the patient had been very upset during the night, and was in bed at home. She was seen two hours later, and the picture was bizarre. Her speech and eye-movements were better, the general examination was normal except for a pulse of 56, the fundi were normal, **but every few minutes she would moan, groan, and writhe**. She could give no specific reason for the outbursts. The differential diagnosis was still undecided between organic and functional disease.

It was finally possible to arrange a consultation with a neuropsychiatrist, and she was taken 20 miles to the office in the back of a car. His

findings added nothing; he could not rule out a brain lesion, yet he advised therapy for a psychoneurosis (including a colonic irrigation), which left her exhausted.

#### QUESTIONS:

1. What is the probable diagnosis at this time?
2. What methods could be used to provide more information?
3. Would an exploratory operation be justified, and if so, where?

M. D., Pima County.

#### CASE ANALYSIS AND ANSWERS:—

A review of the clinical data on this 27-year-old housewife *reveals certain features bearing on the diagnosis that appear reasonably important*. On the first examination *the pulse was recorded at 60 beats per minute*. Later in the course of her illness the pulse was again recorded at 56 beats per minute. In spite of a normal spinal fluid pressure reported on one occasion, *the increasing bradycardia suggests a space-taking intracranial lesion*.

While *the disturbance of speech, faulty concentration and behavior mannerisms* could possibly be explained on a functional basis, such signs on the other hand can and often are caused by *an organic lesion*. *Infection*, as well as all other general conditions with cerebral manifestations, *appear to have been pretty well ruled out* by adequate studies.

Regardless of the fact that there was no history of trauma, it would be fair to consider seriously the diagnosis of *chronic subdural hematoma*. These lesions are perhaps the most difficult of all intracranial lesions to recognize. They seldom give much in the way of abnormal physical signs until late. Probably the most constant manifestation of this lesion is alteration in memory, judgment, orientation, habits, personality, etc. These changes may be extremely mild and transitory. They are often sufficiently subtle to escape recognition by those in the immediate household. The wife or the husband, as the case may be, often will remark in retrospect that the patient did seem a little queer at times. Minor head injuries as a rule are forgotten by patients whose sensorium is disturbed by these lesions. Further, such injuries are often not known to even intimate acquaintances. The patient usually remembers such accidents several months after recovery.

*An intracranial tumor would of necessity receive most serious consideration*. Tumors of the

glioma group tend to invade the cerebral hemispheres and the clinical history is often brief and of comparatively short duration. Two or three months will often tend to show a *progression of exacerbations*, and what may appear to be *remissions* of symptoms. The patient, however, never quite recovers completely during the interval of pseudo-remission.

The questionable *protrusion of the eye* is not uncommon in any supratentorial space-taking lesion causing increased intracranial pressure, whether subdural hematoma, neoplasm, etc. Local pressure on the vascular sinuses may *obstruct the venous drainage* from the structures in the anterior fossa and give rise to actual *transitory proptosis* even before the appearance of extra-ocular palsies, changes in the pupillary reflexes, etc.

Neoplasms give rise fairly early to contralateral changes in the reflexes. When such lesions are situated in the posterior half of the supratentorial space, visual field changes can usually be demonstrated. When the major hemisphere is involved, aphasic manifestations are more prominent. If the lesion is in the anterior half of the brain and in the major hemisphere, habits, personality, temperament, orientation, judgment, etc., are usually altered. If the posterior half of the frontal lobe is affected in a major hemisphere, motor aphasia appears early and offers no difficulty in recognition.

The cerebral manifestations in this patient which were interpreted as a *possible psychosis* do not appear sufficiently convincing to allow them to be relegated to a functional or psychotic level. The garbling of sentences, leaving-out of words, both in speech as well as in reading, are suggestive of disturbance in the *parietal or temporal region of the major hemisphere*.

*Encephalitis and abscess formation* are not given much consideration since there was no evidence whatever in the record of a febrile reaction. Normal spinal fluid findings further appear to be inconsistent with intracranial infection, either acute or chronic. A single examination, however, is not sufficient to rule out entirely the presence of an infectious process. Other cerebrovascular lesions, such as thrombosis or hemorrhage, likewise have little in their favor. Thrombosis is quite rare in young people. On the other hand an *intracranial cerebral aneurysm* might very well occur during this age, but to give rise to actual symptoms there would more than likely

be a history of a *sudden episode* that would be suggestive of a rupture. Arteriovenous malformations may likewise appear dramatically, with an intracranial hemorrhage, but subsequently tend to recover. Usually such accidents in these lesions are preceded for years by mild symptoms and signs. Epilepsy is a common manifestation. The traumatic variety of arteriovenous fistula hardly needs consideration on the basis of the available data.

*Of the granulomatous lesions* in a colored person, chronic disseminated tuberculosis involving the brain is not uncommon; the majority of these cases, however, show an increase in cell count and other changes in the spinal fluid which usually establish the diagnosis. The laboratory data appear to rule out syphilis.

*From a diagnostic point of view* it would seem that this patient would have benefitted by an *electroencephalogram*. This might have given a clue to the site of the lesion, and possibly some indication as to its character. It is assumed that the patient is right-handed and the disturbance of speech would therefore be consistent with a *lesion somewhere in the left cerebral hemisphere*. Serial angiography would have given further information with respect to the possible nature of the lesion. It would have shown any disturbance of the vascular system that would be present in a space-consuming lesion. On the other hand, in the case of vascular occlusion, this would also have been demonstrated. *Pneumoencephalography*, either by direct ventricle puncture or lumbar puncture would have given valuable information. With such data available, a positive diagnosis can be made in the case of most intracranial lesions. Finally it should be emphasized that repeated examinations are most important if a correct diagnosis is to be made in some of the more or less obscure intracranial lesions.

R. B. Raney, M. D.,  
1136 West Sixth Street,  
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(NOTE — The fate of this case has been learned. Death occurred abruptly, after a convulsion and several hours of coma, shortly after the end of the case-history. At autopsy a circumscribed 5 x 5 cm. spherical mass was found in the left cerebral hemisphere just above the Sylvian fissure. Microscopically it was a medulloblastoma. The impression and localization by Dr. Raney are substantiated.)



## TOPICS OF CURRENT MEDICAL INTEREST

### RX, DX, AND DRS.

By Guillermo Osler, M. D.

**FOLLOW-UP**—The reputed use of a mysterious drug called "ACTEDRON" (to produce confusion and confession) was reported in this column in April. Its composition was not known, but it was promised that the origin would be tracked down. . . . Through the kindness of Dr. Arthur Tatum, professor of pharmacology at the University of Wisconsin, and Dr. Austin Smith, Secretary of the A.M.A. Council on Pharmacy and Chemistry, it has been found that Actedron is known as "Aktedron" in the 1946 German drug-lists, and the chemical name is phenylisopropylamin. . . . More simply, it is BENZEDRINE, or, generically, Amphetamine. . . . This makes the report much less mysterious.

The drive to halt RHEUMATIC FEVER by treatment, education, and the development of facilities for care is a necessary and wise one. We can't decrease heart disease without decreasing its causes. . . . The picture is not entirely gloomy, however. Dr. G. M. Wheatley, of the Metropolitan Life Insurance Company and the American Academy of Pediatrics, has reported that the mortality rate of rheumatic fever has dropped 90 per cent since 1920 (22 per cent between 1920 and 1940, 85% since 1940.) The great recent decrease is attributed to the use of antibiotics for infections which are precursors of the disease.

If anyone has occasion to use BAL (British Anti-Lewisite) for ridding the body of certain heavy metals, he would profit by knowing one of its unpleasant features—it smells like polecat. . . . In fact, warn your nurse that BAL and the syringes will smell that way; warn the patient that he will notice the odor of polecat; and he can then warn his friends that his breath will also be mildly fragrant.

**VITAMIN B12**, which was mentioned in the February column, is making practical progress. . . . Further reports testify to its value in various types of macrocytic anemia, and to its generalized effect on the several systems which suffer from the deficiency. . . . The material is commercially available in limited quantities, and is marketed under the name "Cobione" by Merck and Company. It is supplied in saline solution in 1 c.c. ampoules containing 10 micrograms of the crystalline vitamin B 12 per c.c., and the current

price to physicians is \$2.00 per ampoule. The optimal dosage has not yet been determined.

**LIFE SOMETIMES BEGINS AT 70**, in certain fortunate cases. . . . Five years ago Dr. Benjamin Dugger retired as professor of Botany at the University of Wisconsin. Three years ago, at the age of 70, while working in the Lederle Laboratories, he found a new strain of streptomycetes. It was one of 3,400 he had isolated from 600 soil samples. . . . The new golden culture produced an antibiotic called "aureomycin," of which we have recently written. VIVA Maturity!

The optimal duration of **REST-TREATMENT FOR ACUTE CORONARY THROMBOSIS** is a moot point. Samuel Levine of Boston believes many lives are ruined and social derelicts produced by advice to take three to six months to rehabilitate; six weeks will usually be sufficient, and the ultimate mortality the same. . . . The average physician, on the other hand, often finds patients who cannot be kept in bed **LONG** enough unless they be shackled, drugged, or slugged. Perhaps, with good judgment, diplomacy, and the modern drugs, the optimal period can be arrived at.

**ADHESIVES** have been developed amazingly. Scotch-tape and other products for special use are notable examples. . . . Johnson & Johnson now announces **A NEW SELF-ADHERING BANDAGE**. It sticks to itself, but not to skin or hair, is water-proof and oil-resistant, and may be removed without discomfort. . . . The clever, dramatic name for this handy stuff is "self-adhering bandage!"

The "rythm", or old Ogino-Knaus, **THEORY OF CONCEPTION** fought an uphill fight through 20 years for acceptance by physicians. . . . The obstructions to a precise demonstration of "fertile" and "safe" periods were the variability of individual menstrual cycles and the human tendency to err. . . . As recently as a year ago it seemed that a simple, costless method had been found to show the date of ovulation—the body temperature rose abruptly from a basal level at that time. . . . Then some rat (literally) came along and proved that there could be one or several days of variation between the rise in temperature and the rupture of the follicle. (The rat was sponsored by Dr. E. J. Farris of Philadel-

phia). . . . The controversy still rages, but the problem as to when is the most effective/dangerous time of the cycle edges along towards a solution.

If you want to please an artistic wife or friend, give them THE LITERATURE (including envelopes) which comes from THE ABBOTT LABORATORIES. It can't be beat. . . . It is colorful, illustrative, and interesting—and often includes original paintings by established artists. It does as much for the artists as it does for the products as it does for the doctors. . . . The products (like those of quite a few other laboratories) are pretty solid stuff, too. Modern doctors are lucky that way.

Among the measures used to treat acute cardiac decompensation, **VENESECTION** is most often forgotten. . . . Rest, salt-poor diet, digitalis, coronary vasodilators, and diuretics are all remembered and used, but the quickest methods for removing a load from a laboring heart is the removal of a pint of venous blood. . . . Venous pressure is the criterion for venesection, with 18 to 20 cm. of water being the critical level. . . . The availability of **VACUUM EQUIPMENT** for transfusions makes the task simple, clean, and quick—and the blood can be sent to the "bank" for use.

The uses of **SYMPATHETIC NERVE SURGERY** are slowly becoming defined. Certain types of hypertension are known to be notably benefitted, and methods to reduce the hazards of such surgery have also been described. . . . Hinton and Lord of New York have derived A SET OF RULES TO LOWER THE MORTALITY FROM THORACOLUMBAR SYMPATHECTOMY by reviewing their series of 375 operations for hypertension. They analyzed the patients according to the relative functional condition of several organs. Advanced renal, cardiac, or cerebral signs were contraindications to surgery, as was a combined disability. Generalized arteriosclerosis was a poor sign, but age per se was not a factor.

**BASIC SCIENCE NEWS** — An opinion has gradually evolved, and is confirmed by the studies of 1,300 cases by Custer and Bernhard, that **LYMPHATIC TUMORS** show a striking fluidity in histologic pattern, with transitions and combinations within the general grouping. . . . This explains many differences of diagnosis between lymphoblastoma and the Hodgkin's trio which, according to Jackson and Parker, consists of the paraganulomas, granulomas, and sarcomas. . . . Sections from various tissues, at various times in the course of the disease, show notable variations. They are all malignant mesenchymal tumors, and the differential diagnosis has scant practical importance anyway. The thing to remember is the **POSSIBLE** variability.

The relative value of **PENICILLIN** in various types of **SYPHILIS** seems now to be more nearly defined. The recent literature, and a potent Michigan symposium, have suggested the following points—(1) Penicillin is superior to all other methods in prevention of pre-natal syphilis. There is no evidence of a maternal hazard. (2) Penicillin, alone, is satisfactory for seronegative primary syphilis. (3) In seropositive early syphilis, penicillin followed by combined arsenoxide and bismuth seems best, and may be taken while ambulatory. (4) Penicillin, alone, is as good as penicillin and malaria for neurosyphilis, meningo-vascular syphilis, and tabes dorsalis. (5) The results of combined therapy has been slightly better, as determined by the spinal fluid, in paresis and tabo-paresis, though the hazard is less with penicillin alone. . . . Herxheimer reactions occur in 50 to 60% of cases of early syphilis, but therapy need not be discontinued.

While speaking of penicillin, a mention should be made of the recent report by Dr. Eagle, et al., of the National Institute of Health, that a single tablet of 250,000 units will almost completely **PREVENT GONORRHEA** if taken orally a few hours after possible exposure. . . . This study was made on sailors after shore leave. The method is said to be suitable for general use. Its effect in prevention of syphilis is not yet known, but alertness is advised. A warning has already been voiced that such a method may increase the hazard of resistant strains of gonococci.

A current trend in thinking about **ULCERATIVE COLITIS** has emphasized emotions as a cause. Infection usually exists, though without a regularly specific agent, and accounts for many of the complications. . . . Perhaps emotions merely pull the trigger of a complicated mechanism,—it has been shown that nerve crises are associated with a marked increase in the **LYSOZYME** content of several secretions; lysozyme is mucolytic, and allows ulceration; these findings have been present in patients with recurrent upper and lower intestinal lesions. . . . Therapy should include help from psychiatrists and, if there is toxicity, the use of antibiotics and sulfonamides. Sparing the colon from flow of its contents has the best effect. An ileostomy produces quick results, but is not sufficient by itself, nor is the stoma pleasant. Colectomy has the highest mortality but the best results, even though it has been reserved for advanced cases. . . . A recent laborious but effective method (combined with other medical therapy) has been the **INTUBATION AND ASPIRATION** of the intestinal contents as they reach the end of the small intestine. The diet consists of enzymatic protein hydrolysate, dextrimaltose and, vitamins; it requires no digestion and is easily absorbed. This routine can be used in early cases, or to prepare the patient for surgery; diarrhea ceases, nutrition im-

proves, and the chemical disturbances are corrected.

The efforts of this column to present the medi-

cal news is serious and unrelenting, but lest they become stuffy we keep in mind the innocent slogan of an Iowa country newspaper, which read—"IT SERVES THE FARMERS RIGHT."

## A.M.A.'S PLAN OF BATTLE

### An Outline of Strategy and Policies in the Campaign Against Compulsory Health Insurance

CLEM WHITAKER and  
LEONE BAXTER  
*Chicago, Illinois*

American medicine, in its campaign against compulsory health insurance, cannot afford to fight alone.

This must be a campaign to arouse and alert the American people in every walk of life, until it generates a great public crusade and a fundamental fight for freedom.

We must make every American know that medicine is *not* simply fighting for self-interest, but is actually fighting to avert the creeping paralysis of bureaucratic regimentation of the people's lives.

We need the help of every American who honestly believes in the American way of life—and our campaign must be geared to get that help.

Any other plan of action, in view of the drift toward socialization and despotism all over the world, would invite disaster.

Doctors don't need to stand alone in this battle. They must not stand alone. And it's our job to see that they don't stand alone.

That's the reason that the American Medical Association, in establishing its National Educational Campaign, has set as one of its major objectives—the mobilization of other great national organizations, representing other professions, trades and businesses; civic and fraternal, religious and patriotic groups; women's clubs, farm and veterans' organizations and every other association which is willing to make common cause with medicine in this battle.

That's one of the top priority jobs we are going to be organizing and directing from the national campaign headquarters. But the success of that drive, in the final analysis, will depend on whether it reaches below the national level—down to the grass roots, in every State and county and city in America.

Let's set the record straight here today, too, on the subject of lobbying—and the smear attack that has been launched against the A.M.A. in that connection.

The charge has been made by the advocates of compulsory health insurance that the American Medical Association plans to invade Washington with a high-powered lobby and a \$3,000,000 "slush fund" in an effort to block passage of the legislation in Congress.

That charge is absolutely false—and every State and county medical society, and every doctor who values the good name of medicine, should see to it that this smear attack is branded as false in every community in America.

The Washington office of the A.M.A. is one of the most modest legislative offices maintained by any of the national associations in the Capitol—and is staffed by men of unquestioned integrity, who are highly respected in Congress.

The American Medical Association isn't embarking on any high-pressure lobbying campaign in Washington, nor is there any "slush fund." The socializers in the Office of Social Security, who have used their government facilities and government funds to lobby Congress, are simply sending up a smoke-screen against A.M.A. as a cover for their own highly-questionable operations, and the people need to be told that.

The A.M.A., in its campaign, is carrying its case to the people of America in a grass roots crusade which we hope, with your help, and the help of tens of thousands of others, will reach every corner of this country.

One of the greatest rights which we have as a free people is the right of petition—and we intend to exercise that right, even though Oscar Ewing and his socializing satellites will do everything in their power to keep us from getting our story to the people. If that is lobbying, it

Presented by Clem Whitaker and Leone Baxter, Directors of the National Education Campaign of the American Medical Association, for the Conference of State Medical Societies, Chicago, Illinois, February 12, 1949.



is lobbying in the finest American tradition. The American people, not Congress, will decide this issue in the final showdown, and Mr. Ewing knows that. That's why he fears the National Education Campaign which the A.M.A. has authorized—and that's why he will do his utmost to discredit and block us.

There's another important financial policy with regard to this campaign which you should know, too—and which should be made known to every State and county medical society, as it will help to keep the record straight and let doctors know how their funds are being handled.

That policy is this:

*Every dollar expended by the national campaign office will be reported in a check-by-check accounting to A.M.A. And our financial reports will be available for government inspection at any time!*

That is the complete answer to the insinuations and criticisms of medicine's enemies, or political demagogues who hope to make a whipping boy of the medical profession.

Let's consider some of the other basic policies of the campaign.

The Coordinating Committee, in approving a broad, public campaign, beamed directly to the people, rather than just to Congress, established two major objectives:

The *immediate objective* is the defeat of the compulsory health insurance program in Congress—and there is great urgency in that phase of the problem. The first showdown battles on compulsory health insurance may come within the next 60 or 90 days. We can't afford to be lulled into over-confidence by reports out of Washington that no serious effort will be made to push through the program at this session of Congress. That may be propaganda emanating directly from the camp of our opponents.

The *long-term objective* is to put a permanent stop to the agitation for compulsory health insurance—and the most vital step in achieving that objective will be an all-out campaign to enroll the American people in voluntary health insurance systems. The A.M.A.'s Coordinating Committee has authorized and directed us to conduct a Nation-wide educational drive to make America health insurance conscious — and to work with the pre-paid hospital plans, the pre-paid medical plans, the accident and health insurance companies and all other sound groups in the voluntary field to achieve this objective.

This is an affirmative campaign, not just a negative campaign—and I think we need to hammer home that basic point in every public appearance.

We're not just working to beat a bill. We're going to work together to resolve a problem. We're going to do something about taking the economic shock out of illness!

That's the kind of program your A.M.A. is backing—and that's the only kind of program that will eventually and finally lay the ghost of compulsory health insurance in this country.

We have already held preliminary meetings with representatives of the medical care plans and the private insurance companies to pledge them A.M.A.'s vigorous assistance in promoting voluntary health insurance—and to enlist their aid, if possible, in stepped-up selling and advertising campaigns.

I believe there are representatives in attendance here today from the medical and hospital plans and the health and accident underwriters.

In the presence of the Board of Trustees and the Coordinating Committee of the American Medical Association, I want to make this unqualified statement concerning the A.M.A.'s National Education Campaign:

The accent in this campaign is going to be on the positive. We are going to do everything in our power to acquaint the American people with the desirability and the availability of pre-paid, budget-basis medical care. We believe in voluntary health insurance, not just as a political expedient, but as a sound development in medical economics. We want everybody in the health insurance field selling insurance during the next two years as he has never sold it before—knowing that he has the prestige of the American Medical Association, and all its power and facilities, squarely behind him. And we are going to ask the doctors, when they are talking to patients in their offices, who are in need of budget-basis medicine, to take time to encourage them to enroll in a good, sound voluntary health system.

That's a fundamental part of the A.M.A. program—and I hope every representative of a State Society in this room will take that message home with him.

We have an inspiring case to present in our affirmative campaign.

More than 52 million Americans already have decided that *The Voluntary Way Is The Ameri-*

can Way to cope with this problem—and have enrolled in voluntary health insurance systems.

The tremendous growth of the voluntary systems has come in a very short span of years—and has been one of the most spectacular economic developments in our time.

If there was even half the demand for compulsory health insurance in this country that exists for voluntary health insurance, Oscar Ewing and the socializers would be on the road to victory and nothing could stop them.

But the major demand for compulsory health insurance in the United States is an artificial, trumped-up demand, generated by social bureaucrats. They are leaning heavily on the false lure of something-for-nothing, and the people's fear of the cost of unexpected illness, in a desperate drive to drum up public favor for their political patent medicine.

On the other hand, American medicine and the voluntary health insurance systems already are near the half-way mark in the campaign to provide pre-paid, budget-basis medicine for the American people within the normal framework of our free enterprise system.

The job is half done, but it is of urgent importance that it be completed. Every American who needs pre-paid medical and hospital care should know that it is available to him. We need to take health insurance out of the luxury category—and let the people know that it can be bought economically and should be included as a necessity in the home budget, just as food and shelter and life insurance are budgeted.

The finest antidote for compulsory health insurance is voluntary health insurance—and the agitation for socialization of the medical profession will come to a halt when the majority of the people have been provided with the remedy.

That's the way we can accomplish our long-term objective—and every State and county medical society in the United States ought to become a strong ally of the insurance industry and the prepayment systems, and work with them until the final objective is achieved.

Now let's take a good, hard look at our *immediate objective* — the defeat of the compulsory health insurance program in Congress.

The *time schedule* of the opening battle in Congress we can't determine. Our opponents have that advantage—and our only safe course, regardless of the conflicting and confusing reports which will emanate from Washington, is

to mobilize for all-out action *now* and be ready whenever the attack comes.

Our own militancy and our own readiness for a showdown may make the socializers hesitate to force the issue at this session of Congress—and may give us badly-needed time to get our long-range campaign under full steam. But we can't have any assurance of that desired development.

The fate of other bitterly-controversial issues now pending in Congress may be a decisive factor in determining the tactics of our opponents. If other legislative proposals in the controlled-economy program of the Truman Administration should be jammed through this Congress fairly early, we would be in real danger that the steam-roller would keep right on rolling—and in that event medicine might be engaged in a bitter battle for survival before the end of this session.

On the other hand, if Congress becomes embroiled in heated and long-drawn controversy on other issues which are ahead of compulsory health insurance on the agenda, we may have a breathing spell. Or we may find Oscar Ewing proposing a watered-down bill, hoping to disarm us with apparent moderation and get half a loaf this session with the full expectation that he will be able to get over the rest of his program later.

*We can't call the shots on just how or when the battle will be joined, but we can and must get American medicine off the defensive and into an affirmative, offensive position. That's an immediate and vital necessity.*

We have emphasized that this is going to be a sound, constructive campaign.

But let me *underscore* this statement:

This isn't going to be any *panty-waist* campaign!

The A.M.A. is going to wage a truthful, hard-hitting campaign, in adjective-studded language that the American people understand.

The critics of the medical profession have had their field day—and they'll continue to have it until American medicine strikes back and strikes hard.

There are going to be no punches pulled in our national publicity campaign—and we want you to know that.

We're going to Attack—and Attack—and Attack—until the truth about the vicious consequences of political medicine are known throughout this country.

We're going to put the foes of American med-



icine on trial before the bar of public opinion in this nation—and let the people decide for themselves whether they want *men of medicine*, or *medicine men*, in charge of the health of their families.

We're going to expose the shameful misrepresentation, the juggled facts and garbled statistics, the phony draft rejection figures and the deliberate attempt of Patent Medicine Man Oscar Ewing to hide from the people the true cost and the social consequences of the scheme of socialized medicine which he is proposing.

That's one of the jobs we have at the head of the list in national headquarters—and we hope that all of you, in your home States, will duplicate it.

If we're going to turn the tables on the socializers, and get the medical profession into an affirmative position, there's another immediate job to be done. That's the job of mobilizing *organization support* for medicine's cause in agriculture, in business, in industry, in the veterans' organizations, in the women's clubs, in churches and lodges—and in all the thousands of organizations which make up a cross-section of America.

The fastest way to make our influence felt in Washington is to marshal a powerful array of Nation-wide organizations, representing great groups of American citizens, in opposition to compulsory health insurance.

That job is the direct responsibility of our national headquarters and the drive for specific action by hundreds of national organizations, trades and professions already has started. But we'll need lots of help from all of you in making this phase of the campaign successful.

In moving for important endorsements of medicine's position, medical leaders who have the contacts often will be called on to help open the door or close the sale.

From these major endorsements will stem much of our publicity in the early days of the campaign, designed to broaden the campaign into a great public crusade. We need allies, strong allies, whom we can convince that this is their battle just as much as ours. We need the use of their mailing facilities, space in their newsletters, house organs and magazines. We need letters and phone calls and telegrams from their members, flowing to their Congressmen.

All of this requires manpower. Our small professional staff can't possibly do all the work, but we believe that we can find doctors and

others who will do it. Mainly, this is the same task which confronts a military organization. The troops fight the battle, but they first have to be properly mobilized, trained and directed.

In every State and in every county there should be similar organization drives—for action by State and local organizations which help to mould public opinion. We need the impact of their support on your Congressmen—and your United States Senators. We want them to hear from the organizations at home, so that they know how their own constituents feel on this issue.

Miss Baxter, the more practical member of our team, who always insists on nailing down the specifics, will tell you in her presentation what you can expect from the national headquarters — and what we would like to expect from you.

Let me say this to you in that connection:

One of the objectives of the national headquarters will be to provide you with all the materials of war—and to lighten the financial load on the State and county societies. We will attempt to provide you with pamphlets and posters, form speeches, cartoons, mats and other supplies in any quantity you can put to good use. We hope the only limit that will be placed on the materials available to you will be the limit of your ability to get them into the hands of voters in your home States and communities.

The question has been asked whether the A.M.A. will also allocate funds to the States to help in distribution costs, or for other purposes. The answer to that question is "No," for reasons which probably require no explanation.

I want to touch briefly on another probable development in the national campaign which is still in the evolutionary process, but which you will hear about in more detail within the near future.

We have recommended that a national committee of leading citizens in all walks of life be established as auspices for an important part of the work in this campaign—a committee which we will help to organize, but which will also draw strength from many other sources.

This organization will be called the—

#### AMERICAN COMMITTEE FOR HEALTH SECURITY

Under the Committee's name, on one side of the letterhead, will be the slogan: "For Voluntary Health Insurance; Against Compulsion!"

On the other side, balancing this, will be a second slogan: "The Voluntary Way Is The American Way."

Some of the great, outstanding leaders of America have agreed to serve as members of this national lay committee—and we believe it will broaden our front and create a rallying place for thousands of people who have no direct connection with medicine, but who have a healthy interest in the welfare of America.

When the time comes for perfecting that organization, we may ask each of you to help recruit some of the outstanding lay leaders in your State for that Committee.

Now let's return to the most important man in this campaign—the practicing physician!

The 150,000 members of the American Medical Association must be the front line troops in this battle.

The A.M.A. and the State and county medical societies can't win this fight, but their members can.

A doctor can talk to his patients on this issue and get their earnest attention, because this is an issue that involves their health and their relationship with the doctor.

Our greatest need—and this is the most important job you will have—is to get the word to every doctor that this is an emergency, that his help is needed, and that his right to continue in private practice may depend on how he measures up to the challenge.

We need every doctor on fire on this issue . . . taking time out to talk to every leader he knows in the community, urging them to write their

congressmen, stirring his patients and friends into action.

A doctor knows that political medicine is bad medicine—that it means hit-or-miss diagnosis and superficial treatment of symptoms. He knows that personal interest in the welfare of the patient suffers when assembly-line medical practice takes over. And he knows that the quality of medical care steadily deteriorates when doctors succeed or fail on the basis of political preferment, or on the number of cases they can rush through their offices in a crowded day.

No one can talk to a patient on that subject with the eloquence of his family doctor—and we simply must have that doctor at work, if this battle is to be won.

Doctors know, too, if they are familiar with what's happened in other countries, that invasion of the individual's privacy is one of the most objectionable features of compulsory health insurance. They know that the sanctity of the physician-patient relationship goes out the window when government medicine comes in.

That's a subject on which a doctor can talk convincingly—and our campaign pamphlets will provide corroborative material on that personal, compelling issue.

People talk to doctors about their financial troubles as well as their physical ills—and they'll listen to the doctor if he tells them that compulsory health insurance isn't *free*—that, instead, it will mean a 6 or 8 per cent payroll tax on every dollar they earn.

That's the kind of missionary work that will win this campaign—and that, more than all else, will give us a real grass roots campaign.

## WHY I MUST PARTICIPATE IN SOCIALIZED MEDICINE— IF IT COMES

F. N. DARBY, M. D.

105 So. Nineteenth Street  
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For the record and from the record, I wish to preface my statement by reaffirming my consistent opposition to any form of compulsory Health Insurance, Socialized Medicine, or other governmental scheme which is in any way contrary to the American way of life.

To propose non-participation in socialized medicine, if it is enacted into law, is the most dangerous and deceiving type of wishful think-

ing, so-called intelligent doctors can be guilty of.

Ninety per cent or more of active practicing physicians cannot economically afford non-participation under national socialization. Discontinue the average physician's income for one month and he must invade his savings. Continue his non-productivity for three months and he will have to borrow on his insurance policy or from other assets. Prolong this period six months

and he will, of necessity, have to mortgage his home. Sad as it seems the average physician lives from month to month and has no paternal union to help him with his "strike."

Non-participation is the medically disguised, hyphenated, double word for a more applicable and nationally recognized condition called "strike." There are certain inescapable services which the non-participating physician will be called upon to render and no matter how sincere or morally bankrupt he may be, they will have to be furnished.

Acute surgical emergencies, obstetrics and accident cases will have to be cared for regardless of the physician's status. To render the service under this plan and then to bill the patient privately is as fallacious as sending a second bill for services once paid. They cannot be expected to, nor will they pay, twice for any type of service.

To argue that loyal patients will enable a physician to carry on is dangerous thinking. Loyalty wears thin where dollars and cents are involved. In this aspect we have but to consider physicians who have worked in pre-payment groups and then broken away into private practice. The percentage of patients who follow them, in spite of payroll deductions in the original group, are too small to afford them a living practice. Depending wholly upon those whom they "take" away from these groups would result in their eventual starvation.

We have but to borrow from the recent British table of non-participation, and if we possess reasonable intelligence, we can realize that this is not the answer. Non-participation withered like the proverbial snowball in Hades before the financial blizzard created by the scheme. The enrollment of the British doctors in non-participation was originally a majority matter and in less than one year, due to actual economical deprivation it had faded into insignificance. The proponents of socialized medicine are being well served by the program of non-participation. They realize that this gives the doctors a false sense of security and that if the response is sufficiently great the doctors will stop all other efforts believing they have the situation "in the bag." Past experience dictates that the physician will seek the path of least resistance and *this is it!* The advocates of socialized medicine know full well by the British experience, that

the club of non-participation, though large and ominous, is "paper-mache" in effect.

In a factual analysis of non-participation we must inevitably consider our moral if not legal responsibility to the patients in our particular private practices. We cannot honorably sign a strike pledge against them on the one hand and turn and ask them to assist us in the many ways they can in our fight against this menace. Some of us may be so hypocritical, prejudiced and inconsistent!

Many of us possess the deluded idea of turning to other means of gainful employment during the phase of non-participation. Eliminating the small percentage who can afford to clip coupons, collect rents, and enjoy non-professional incomes, the number of physicians who actually can become financially provident in a non-professional field is disputable. The doctor who swears by all that is holy he will do something else is making the statement on a full stomach.

Acquiring a new profession or gainful employment in private industry or enterprise is not an overnight accomplishment for any physician. Age, partial disability, economic aptitude and training are ever present equations in the factor and certainly the odds are against the doctor outside the medical field and will require uncomfortable economic and social re-adjustments.

In the final analysis each physician should seriously consider his own personal status in this matter. His desire to cooperate in the fight should not blind him to the certainty of future violation of his written pledge, through sheer necessity of circumstance.

We should, to a man, approve, sponsor and implement the A.M.A.'s twelve point program on a local and state level. We have no legitimate alternative other than the obvious threat of striking. Careful study of this program does not reveal any suggestion or implication of non-participation as a proper procedure. Non-participation is below the dignity and level of an honorable profession devoted and dedicated to human welfare.



## CONTROL OF TUBERCULOSIS FROM A WORLD VIEWPOINT

JAMES E. PERKINS, M. D.

Managing Director,  
National Tuberculosis Association

With the progressive improvement in transportation, resulting in greater and more rapid mixing of populations, those interested in the control of communicable diseases, including tuberculosis, necessarily have had to broaden their interests and concerns from the viewpoint of the village and the township to progressively larger geographical units, until their vision now encompasses the entire world. It has become increasingly clear that one cannot be content with the reduction or even eradication of malaria, cholera, smallpox, or tuberculosis in one place if the same disease is unchecked in some other part of the world, ever ready to be brought back into a community where it has disappeared if control measures have been allowed to lapse. This has been the story for centuries with regard to cholera and smallpox. This is the story of the spread upon two occasions of a particularly virulent form of malaria from Africa to South America; it is the story of the spread of diphtheria in the past World War and it may be the story of tuberculosis tomorrow.

At the meeting of the First World Health Assembly this past summer in Geneva, nation after nation stressed that the important thing in these modern times is not merely to maintain barriers against the transfer of communicable diseases from one country to another, which is becoming increasingly difficult because modern methods of rapid transportation now so badly outstrip incubation periods, but to eliminate the foci of these communicable diseases wherever they are, so that the danger of new waves of infection radiating from these foci is removed.

Admittedly this is a very large task which will take a long, long time. It is a task which, a few years ago, would have been considered impossible. But new tools and the establishment of new organizations to facilitate the use of these tools make the possibility of realizing this accomplishment no longer merely the idle dream of a visionary.

In tuberculosis control, we do not as yet have as ideal tools as we have in the control of some of these other major scourges, but nevertheless, we have some basic methods of control which have been found effective even though slow, and in addition we now have some new tools, such as

the development of inexpensive small-film x-rays, making mass detection of tuberculosis cases practical, and the mass production and mass application of an anti-tuberculosis vaccine (BCG). We also have seen the development of treatment measures which, although limited in usefulness are nevertheless doing things never before accomplished in the treatment of certain types of tuberculosis. These measures are the antibiotic, streptomycin, and the development of new surgical procedures.

As to advances in the organization of facilities to apply these tools, encouraging developments on an international basis have occurred within the past year. The World Health Organization of the United Nations has been established on a permanent basis and has a special section devoted to tuberculosis control. A start has been made in the reorganization of the non-governmental International Union Against Tuberculosis to make it a more effective agency. The pattern, therefore, which has been set in the United States and which is working so effectively here, namely, the organization of voluntary tuberculosis associations to bring the problem of tuberculosis to the attention of the public and to gain its support of more effective tuberculosis control programs on the part of official agencies, is beginning to be emulated in countries throughout the world. This will be facilitated through the operations of these two international agencies, one representing the various national governments throughout the world, and the other representing the national voluntary tuberculosis agencies.

This program has been advanced further by a temporary international agency, the United Nations International Children's Emergency Fund, which has assumed as one of its major programs assistance in the control of tuberculosis among children throughout Europe. This program consists principally of mass immunization of children by BCG vaccine.

Although the recent withdrawal of Russia from the World Health Organization is a discouraging note in these developments, the active cooperation of other nations throughout the world should help in realizing more quickly the



ultimate objective of eradication of tuberculosis from all parts of the world. It is to be hoped that Russia will come to realize that communicable diseases are no respecters of geographical boundaries, including iron curtains, and that international public health measures to be effective must be conducted without regard to political considerations.

## ARIZONA BLUE CROSS

PHOENIX—Arizona Blue Cross passed the 100,000 mark in membership at the end of 1948, it is reported by L. Donald Lau, Executive Director. The actual membership count as of December 31 was 100,030—an increase of 31,307 over the 1947 membership, Lau said.

"The United States Census Bureau, as of last July 1, estimated the population of Arizona to be 654,000, and based on this estimate, Blue Cross has enrolled 15.3 per cent of the state's population, or approximately one out of every seven residents of the state," Lau said. "In view of the fact that Arizona Blue Cross has been in operation only a little more than four years, this is a gratifying enrollment picture when compared to the national average of 21.3 per cent, or about one in five."

Lau reported that J. O. Sexson, president of the board of trustees of Good Samaritan Hospital, Phoenix, and a member of the Blue Cross board of directors since the beginning, was elected president at the annual meeting at the Westward Ho hotel on Sunday. He succeeds Charles Korrick, Phoenix merchant.

Other officers, all re-elected, are Dr. Preston Brown, vice-president; Glenn Taylor, a vice-president of the Valley National Bank, treasurer, and William J. Wasson, Phoenix realtor, secretary. Sister Mary Eucharist of St. Joseph's Hospital, Phoenix, was elected hospital representative on the executive committee. Other executive committee members are the officers.

Re-elected to the board of directors for three-year terms were Clyde Fox, administrator, Tucson Medical Center; A. M. Crawford, Prescott attorney; Emmett McLoughlin, superintendent, St. Monica's Hospital, Phoenix; Sexson, Korrick, and Dr. Frank Milloy, Phoenix.

Dr. Hal Rice of Bisbee was newly elected to the board for a three-year term, and Sister Mary Agnes of St. Mary's Hospital, Tucson, was elected to serve out the unexpired term of Andrew Martin, resigned; and Carl Muecke, Phoenix,

business agent of the Hotel and Restaurant and Bartenders' Union, A. F. of L., Local 631, was elected to complete the term of the late H. C. Henrie, Bisbee. Both terms expire in 1951.

Lau was named official delegate of Arizona Blue Cross at national and district conferences.

Lau said that three hospitals became fully approved Blue Cross member hospitals during 1948, bringing the total of member hospitals in the state to nineteen. Those admitted last year were Flagstaff Hospital, Holbrook Municipal Hospital, and the United Verde Hospital at Jerome.

Case records show, Lau said, that Arizona Blue Cross paid out to hospitals during 1948, a total of \$686,070.55 for 10,060 cases, representing 62,741 patient days. Payments to hospitals, he said, represented 88.3 per cent of every dollar of gross earned income.

"The 1948 figures indicate an increase over 1947 of 96 per cent in payments to hospitals," Lau said. "The number of cases increased 73.6 per cent and patient days increased 68.5 per cent. In 1947 the average length of stay per case in member hospitals was 6.31 days, and in 1948 the average length of stay was 6.13 days.

"In 1948, Arizona Blue Cross paid more money to hospitals for more cases and more patient days than for the three previous years combined. The total paid out to hospitals for subscribers' care from the beginning until the end of last December was \$1,219,141.84."

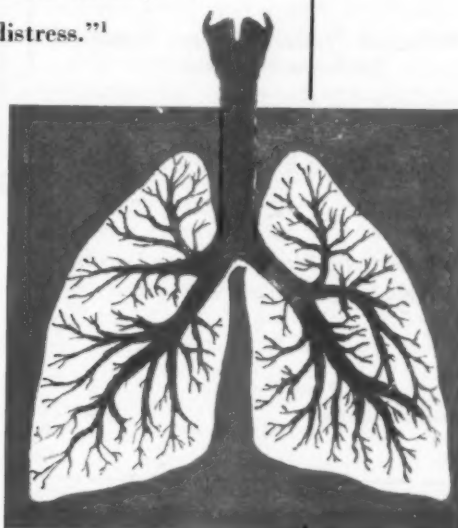
Maternity care again led as the highest hospital utilization factor among Blue Cross members, with 15 per cent of all cases in this classification, Lau said. Since its inception in 1945, the Blue Cross plan has covered 2,507 maternity cases—of which 1,472 were last year, he said.

"Full credit must be given to the member hospitals, which supply the service which the Blue Cross subscriber receives," Lau said. "Arizona Blue Cross is a voluntary, non-profit, fully accredited plan for the pre-payment of hospital care, and it was sponsored and financed in its beginning by its member hospitals. These hospitals recognized the value of Blue Cross at that time, and increasingly for the future. They have supported Blue Cross and encouraged its progress. The continued growth and progress of Blue Cross in Arizona depends on the continued support and encouragement of its member hospitals."



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Journal of

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Vol. 6 May, 1949 No. 5

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## Editorials

### Warm Weather and Air-Conditioning

Arizona usually has a *dry climate*. In the summer, from early June to mid-September, southern Arizona has *hot weather*. And for about six weeks in July and August there is sudden, blustering, drenching *rain* which, though it dries quickly, produces a transient increase in humidity.

These facts of life are known to all but the veriest newcomers. The summer weather is admired by some, tolerated by others, and evaded by a great many. How pleasant it would be, and profitable too, if patient and physician alike could be assured of a constant comfort during the summer months!

Actually, Tucson, Phoenix, Yuma, Douglas, Nogales, et al., have been the sites of a minor miracle of climate-conversion. People have been able for years to hop from one oasis to another, with almost every building from the largest office to the smallest shanty having its own air-cooler. Only a few people besides "the mad dogs and Englishmen" are forced to spend much time in the mid-day sun; the remainder are able to live indoors, with very considerable relief.

Comes the time, however, when we expect

more in the way of help from mechanical science. *What can be done to provide better cooling, especially during the humid mid-summer? What equipment is available? What will it cost?*

We have obtained data from several manufacturers of air-conditioning devices, and from an Arizona engineering firm. The news is fairly good, and may be of value to physicians in arranging for their own comfort, as well as for facilities which will protect the health of their patients.

In general there are two types of air-cooling machines,—the *evaporative* and the *refrigerative*. There is nothing brand new on the market, nothing astounding. The chief change in the situation is in the development, availability, and some decrease in cost (since the war's end) of the refrigerative type. Some manufacturers have improved the "control" aspect. The major principles of cooling devices have been known for 20 to 30 years, and the basic patents have expired.

American economy is based on what is called "a progressive dissatisfaction" with the status quo. This has led from no cooling, to the evaporative type, to the refrigerative type of cooler.

The *evaporative cooler* is the in-draft box-shaped device. It is most commonly used because of its low cost. It consists of a motor-driven fan which draws warm air from outdoors through filter-pads which are kept moist by a water-spray. The air is moved at a velocity of 200 feet per minute, and changes the room air every two or three minutes. The resultant air has been changed from hot and dry to cool and moist. This provides relief except during the rainy season, when the additional moisture reduces the system to a purely ventilatory one.

The cost of evaporative coolers for rooms of 1,000 to 2,500 cubic feet varies from about \$25 to \$75, plus installation. The cost of \$125 to \$150 for a house cooler must be supplemented by the cost of installation plus ducts. (The ducts can also be used for a heating-system.)

The towering tin structures, which look like pagodas or World's Fair lighting fixtures, are evaporative in type but passe; the air is not in contact with water. The radiators become "limed," and service is too expensive.

The *refrigeration coolers* are much more efficient—and expensive. They not only filter and cool the air, but extract moisture from it, thus making them most valuable during times of humidity. They usually consist of an intake fil-

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tration section; a "cold-making" compressor, which uses a refrigerant; a *dehumidifying* section; the *cooling fins*, or coils; the *ventilator* section; and a *control* system.

The General Motors (Frigidaire) equipment, for instance, is made in numerous sizes, including "room-conditioners" and the larger "central-system" machines for houses, stores, and offices. The Minneapolis-Honeywell Company stresses temperature control mechanism in its models.

Most of the air-filters are simple straining-pads of spun glass, etc., but electric precipitation devices can be had. Heating-coils are usually included in the air-conditioning units in Arizona, since they are then valuable for another four months in the winter. The Arizona engineer says that a water-cooled condenser is preferred to an air-cooled type, since the warmed water can then be discarded.

The usual refrigerated machine now uses freon, with a slightly different usage in machines of 250 h.p. or more. Ammonia, sulfur dioxide, and other materials have been used in the past.

The cost of refrigerative coolers depends on size, brand, and the use of extras. The same room of 250 square feet would require  $\frac{1}{2}$  to  $\frac{3}{4}$  h.p., and if a water-cooled condenser was used, the equipment would cost between \$550 and \$750. A decrease of 10%, or even 20%, in the current costs is possible when mass-production exerts its influence, but the cost is high and will probably stay so in the foreseeable future.

This capsule of information may provide a talking knowledge of the subject. More data may be had from the engineers.

W. H. O., Jr.

## Population and Physicians

An attempt has been made to *correlate the changing number of physicians in Arizona with the increase in population since 1940*. With all due respect to statistics of the A.M.A., The Valley National Bank, the Chambers of Commerce, and the Arizona Medical Association, it just can't be done with complete accuracy. The lack of a recent census, the need to estimate current population figures, the presence of a large Indian segment, the need to allow for the federal service physicians, etc., all combine to prevent precision.

It would be pleasant to have accurate figures. The legislature, a few newspapers, and, occasionally, the public have ranged from polite inquiry

to caustic condemnation in their approach to the subject of medical licensure and service. It has been claimed that there is an acute doctor shortage. It is true that there was such a situation during the war years, just as there was everywhere. However, almost 100 per cent of the physicians returned from the armed services, and large numbers have been licensed since then—for example, 123 physicians were licensed during the year 1948.

It has been urged that the standards be lowered for admission to practice in Arizona—to "open the gates for free competition." This is a wooly, demagogic appeal. The current rules are not unfair; they are an attempt to raise and maintain the standards of all sorts of practice, and *they exist chiefly for the protection of the public itself*.

The Arizona census for 1940 showed a total population of 499,261, but that number included 110,000 Indians whose medical care is in the hands of the Federal Government. The current (late 1948) estimate of the population increase is that of the Chambers of Commerce. Their figures are derived from the extension of public services, etc., and can not be called restrained or pessimistic. They believe that there are now 750,000 people in Arizona, including an uncounted number of Indians.

Figures for Phoenix and Tucson are even less definite. There has been a possible increase from 65,414 to 110,000 in "metropolitan" Phoenix and from 36,780 to 60,000 in "metropolitan" Tucson between 1940 and late 1948. The spread of the cities, however, now makes it only fair to use the terms Phoenix "area" (about 220,000) and Tucson "area" (about 126,000), since the physicians in each city surely serve the population of the "area" rather than that which is strictly within the city limits.

There were 519 physicians licensed and engaged in "active" practice in Arizona in 1940 (1942 A.M.A. directory), plus 96 in the Veteran's and Indian Services. The listing at that time did not exclude doctors who had retired. There are now 651 physicians licensed and engaged in practice in the state, 96 listed for the Federal services, and 292 physicians who are licensed but not in practice (and most of them live out-of-state at present). The membership of the State Medical Association was 520 in February, 1949.

Data on the numbers of physicians in private

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practice in Tucson and Phoenix in 1940 are not available, since the only list for that year did not make such a discrimination. At present there are 248 in Phoenix and 158 in Tucson. The ratio of physicians to population in those cities would now be 1:886 in the Phoenix area (or 1:443 in metropolitan Phoenix); 1:796 in the Tucson area (or 1:380 in metropolitan Tucson); and 1:983 in the state of Arizona. As has been said, the population figures are gross estimates, and no allowances have been made for changes in the Indian population.

The comparisons could be made even more tenuous by presenting ratios between physicians in private and Indian practice, and the total population of the state (1:1,085); between the physicians in and out of private practice, plus the Indian service, and the total population (1:764); and between all licensed physicians, in and out of the state, and the non-Indian population. Such comparisons are neither precise nor fair.

The ratio of physicians to population in the United States was said to be 1:710 in 1940. This did not exclude retired physicians, so it is not comparable with the 1948 ratio for Arizona. The Great Britain ratio is 1:870, Denmark 1:940, Canada 1:970, Switzerland, Sweden, Norway, and the Netherlands 1:1,100, France 1:1,300, Ireland 1:1,500, etc. (English physicians are now irregularly burdened. Fifty per cent of London physicians have less than 1,000 patients on their lists, but in Lancashire fifty per cent have more than 2,500 patients.) The ratio in the registration area of Minnesota, a state which includes two large medical centers, is 1:700.

As said in the first paragraph a correlation and comparison is not possible under the statistical circumstances. *It can be said, however, that the population per physician is not out of line with that of U. S. or other national averages, and that the licensing of well-qualified physicians is proceeding at a rapid rate—a rate which in 1948 may well have exceeded the growth of population.*

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### Dr. Archie Percival Kimball

The members of the Arizona Medical Association mourn the loss through death of the universally loved and highly respected Dr. Archie Percival Kimball, formerly of Yuma, Arizona, and more recently of San Diego, California. Though reluctant to lay down the tools he handled so skillfully, he was forced to retire in July, 1948, because of ill health, and he passed away in San Diego, California, on December 1, 1948 of primary carcinoma of the ureter with metastases. He is survived by his wife, Mrs. Mary Ellen Kimball, two sons, Dr. Albert P. Kimball, and Dr. Robert M. Kimball, and three daughters, Mary Ann Bower, Edith Catherine Creighton, and Ellen May Kimball.

He was born in LaPlatte, Nebraska, March 14, 1885 of Levi Kimball and Emily Norton Wilkinson Kimball. He attended primary school in the town of his birth, finished high school in Nebraska City, Nebraska in 1904 and was graduated from Creighton Medical School in Omaha, Nebraska in 1908.

He began practice in 1908 in Wahoo, Nebraska, during which year of practice he married Mary Ellen Boland of Omaha, Nebraska. In 1909 he moved to Creston, Nebraska. It was

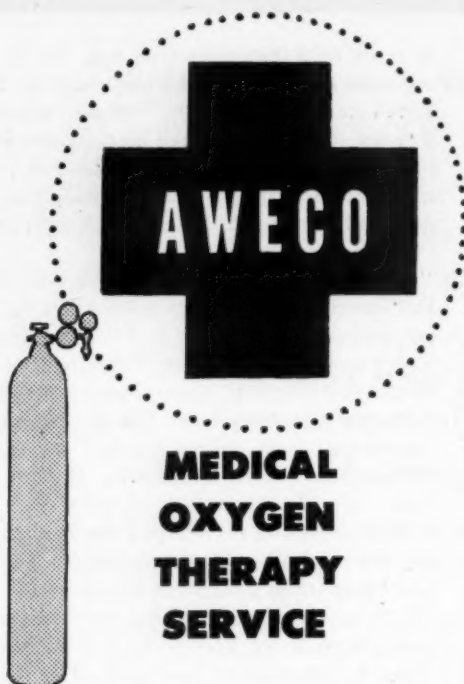
there in 1910 that their first son, Albert Paul, was born. In 1911 Dr. Kimball and his family moved to Colome, South Dakota, where Dr. Kimball established a small hospital and became the doctor for a very wide expanse of pioneer agricultural territory. His first daughter, Mary Ann and second son, Robert Mark were born in Colome.

In 1918 he volunteered as a First Lieutenant and entered the service as a doctor in the Medical Corps. After serving at Fort Sam Houston, Texas and Camp Funston, Texas he was transferred to Allentown, Pennsylvania where he was in charge of a very large hospital helping that community fight the sensational flu epidemic of that time. He served overseas in France and was honorably discharged in 1919.

He returned to private practice in the adjoining town of Winner, South Dakota and practiced there until 1921 when he moved to Casper, Wyoming. He very rapidly developed a large practice as a surgeon between 1921 and 1928 when he successively was Chief of Staff of the Natrona County Hospital, delegate to the Wyoming State Medical Society and President of the Wyoming State Medical Society. He was the presiding president for the Tri-State Medical Society meeting between Idaho, Wyoming, and Montana held in the Yellowstone National Park in 1926. Two more daughters, Edith Catherine, and Ellen May were born in Casper, Wyoming in 1923, and 1927.

Following the closure of the refineries in Casper, Wyoming early in 1928, Dr. Kimball moved first to Logan, Utah, where he practiced for one year, and then to Yuma, Arizona. While in Yuma, he developed a state-wide reputation as a surgeon and was granted a fellowship in the American College of Surgeons. He was for many years a member of the Credentials Committee of the American College of Surgeons. He actively participated in the practice of medicine from 1929 until 1944 when he moved to San Diego, California. During the time he practiced in Yuma, he was joined at one time by his two sons.

His was a full life of devotion to his fine family and large circle of friends, and of valued service to his fellow-men.



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## PERSONAL NOTES

**DR. MARCY L. SUSSMAN**, Phoenix, announces the opening of his office at 800 North First Avenue. He is a diplomate of the American Board of Radiology. He was formerly clinical professor of Radiology at the College of Physicians and Surgeons, Columbia University, New York City.

**DR. LOUIS G. JEKEL**, Phoenix, and **DR. GEORGE K. ROGERS**, Phoenix, have been certified by the American Board of Dermatology and Syphilology.

**DR. CHARLES E. SMITH**, Stanford University Medical School, California, recently addressed the Veteran's Hospital, Phoenix, on the subject of "Coccidioidomycosis."

**DR. LESLIE B. SMITH**, Phoenix, was the guest April 7th of the Los Angeles Academy of Medicine.

**DRS. PAUL H. CASE** and **ARCHIE E. CRUTHIRDS**, Phoenix, recently attended a meeting of the Pacific Coast Ophthalmological-Otorhinolaryngology Society at Coronado, California.

**DR. JOHN GREEN**, Phoenix, attended a meeting of the Western Society of Neurological Surgery in San Francisco recently.

**DR. ONIE WILLIAMS**, Phoenix, attended the Louisiana Graduate Assembly in New Orleans in March.

The community of **ST. JOHNS** will have a new hospital by fall. It will contain 13 beds, a resident physician, dental facilities, and accommodations for a county or town nurse. Funds for equipment are being sought.

**DR. JOSHUA P. WOODS**, of the Tucson Veterans Hospital, has retired from active duty. Dr. Woods has been in federal service for 29 years, and at Tucson since 1930. He has recently been in the out-patient section.

**THE MARINE CORPS LEAGUE**, a national association for that section of the Armed Forces, is arranging to build a convalescent home in the Tucson area. The hospital will care for honorably discharged marines, those with respiratory diseases.

The April schedule of Guest Lectures at the Tucson Veterans Administration Hospital include "Indications and Contra-Indications in the Use of Vagotomy," by **DR. WALTMAN WALTERS** of the Mayo Clinic; "Early Diagnosis of Carcinoma of the Cervix" by **DR. C. E. GALLOWAY** of Evanston, Illinois; "Irradiation Therapy" by **DR. LUDWIG LINDBERG** of Tucson; and "Chemotherapy

in Tuberculosis" by **DR. EMIL BOGEN** of Olive View, California.

**DR. L. H. HOWARD** has been reappointed city health officer of Tucson for the tenth consecutive two-year term. Dr. Howard is also Pima County health officer.

The Tucson public schools, "Condemned to Neglect" in an article by that title in a national woman's magazine, are returned to grace. The magazine has apologized for the erroneous statement that the schools have no medical observation.

**DR. WALTMAN WALTERS**, of the Mayo Clinic, Rochester, Minnesota, also spoke to the Veterans Hospital, Phoenix, on April first.

The Arizona Pediatric Society was addressed at a recent meeting by **DR. WILLIAM NELSON**, professor of pediatrics at Temple University School of Medicine, on "Obstruction in the Upper and Lower Respiratory Tract."

**DR. HOWARD D. COGSWELL**, of Tucson, has recently been offered a faculty post in the department of surgery at the University of Denver Medical School. He has, however, moved to new offices at 2440 East Sixth St., with **DR. HOLLIS BRAINARD**, and will continue in the practice of surgery.

Six Tucson physicians participated in a roundtable seminar on arthritis at the Veterans' Hospital. **DR. SAMUEL ALTSHULER** acted as moderator, and the panel was composed of **DR. C. H. ARNOLD**, chief of the hospital physical medicine service; **DR. PAUL HOLBROOK** and **DR. HARRY THOMPSON**, specialists in arthritis; **DR. ARTHUR PRESENT**, radiologist, and **DR. R. E. HASTINGS**, orthopedic surgeon.

**DR. HENRY J. STANFORD**, of Tucson, has been elected a member of the Founders Group of the new Board of Thoracic Surgery, an affiliate of the American Board of Surgery.

**DR. JOHN A. LARSON** has resigned as superintendent of the Arizona State Hospital for the Insane. Dr. Larson has announced his accept-

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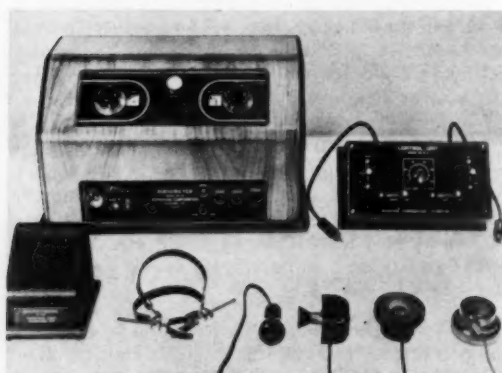
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ance of the position of superintendent at the Longcliff State Mental Hospital, Logansport, Indiana.

A recent survey of the history of the **MARTIN DRUG COMPANY** states that it has been in existence for more than 80 years in Arizona, and 66 years in Tucson. The company now includes eight drug stores and a warehouse, and it stocks more than 35,000 articles. Each pharmacy has an average of three pharmacists, compared with the national average of less than two.

**DR. HOMER I. ROADS**, a non-practicing resident of Tucson for the past eight years, died in Rainsboro, Ohio, after a six weeks' illness. Dr. Roads returned to Ohio in August, 1948 to take a fellowship in dermatology at the University of Cincinnati.

A **NURSERY SCHOOL FOR CEREBRAL PALSY** has been set up in Phoenix by the Junior League. The project was suggested by the National Society for Crippled Children and Adults, and is to be supervised by a board from the Maricopa County Society and the Cerebral Palsy Parents Council. Therapeutic care will be provided, as well as directed play.

**DR. CHARLES C. CONGDON** and **DR. WESLEY S. FEE** have been released from service with the medical corps of the Armed Services.

**VACCINATION OF INDIAN CHILDREN** against tuberculosis, using BCG vaccine, will begin April 1st, the Bureau of Indian Affairs has announced. Eight vaccination "teams" will visit the seven Arizona agencies and one boarding-school, and also the agencies in six other states. **DR. A. P. KNIGHT** of the USPHS and **DR. A. W. DAHLSTROM** of the Indian office are in charge.

The Station Hospital, Davis-Monthan Air Force Base of Tucson, presented **DR. HERBERT DAVIS**, Professor of Surgery at the University of Nebraska, in a reception and invitational lecture. Dr. Davis spoke on "Intravenous Fluids and Nutrition in the Acutely Ill Patient."

**DR. R. A. HICKS**, of Willcox, has announced the erection of an 18-bed community hospital in Willcox, to be called **THE VALLEY HOSPITAL**. The structure has been purchased through the cooperation of citizens in San Simon, Bowie, and Willcox, and it was formerly the hospital at the prisoner-of-war camp at Lordsburg, N. M.

**DR. KARL MENNINGER** of the Menninger Clinic, Topeka, Kansas, and chairman of the National Committee for Mental Hygiene, addressed a large audience at the Tucson Sunday Evening Forum on "Psychiatry and Human Failure." He

was introduced by **DR. LINDSAY BEATON**, Tucson neuro-psychiatrist.

**MR. CLYDE FOX**, administrator of the Tucson Medical Center, has been elected to a three-year term on the Board of Directors of **ARIZONA BLUE CROSS**. **SISTER MARY AGNES** of St. Mary's Hospital has been named to fill out an incompleting term.

**DR. WILLIAM B. STEEN** of the Tucson Clinic gave the medical lecture to the Society of Sigma Xi at the University of Arizona. Dr. Steen's topic was "Allergy" as it applies to the Tucson area.

The Arizona Department of Health has announced that the state **INFANT MORTALITY** for 1947 was 52.4 per 1,000 live births. This rate is second highest (to New Mexico) in the nation. The national average was 32.2. The cause for the Arizona rate is said to be the high rates among the Indian and Spanish-American groups.

A report on the progress of **HEARING AND SPEECH EXAMINATIONS** was made to a meeting of Tucson physicians through the sponsorship of the Arizona Society for Crippled Children. **DR. JOSEPH KINCAID**, chairman of hearing conservation for the state medical society, **DR. ELIZABETH LAIDLAW** of the public school system, and **DRS. EARL BROWN, BLAIR BAYLOR, HARRY and DENNIS BERNSTEIN, HARRY NEFFSON**, and **JOHN MIKELL** attended.

**DR. STANFORD HARTMAN** of the Lois Grunow Clinic, Phoenix, is consultant physician to the Arizona Society for Crippled Children. Dr. Hartman has specialized in the field of cerebral palsy, and has conducted clinics for the society for such patients.

**DR. FLORENCE B. YOUNT** of Prescott has been appointed by Governor Garvey, and confirmed by the senate, as a new member of the State Board of Public Welfare.

The Sharp-Fletcher Sanatorium, once known as Reiridon's of East Copper Street in Tucson, has been sold. It will be operated by the new owners as **THE TUCSON SANATORIUM**, with facilities to care for 20 patients of all types. The manager will be Mrs. Katherine Ellis, who formerly was in charge of the Orange Grove Sanatorium in Phoenix, and who was originally trained in Boston. Her staff will be composed of registered nurses.

**DR. BRICK P. STORTS**, Tucson pediatrician, spoke at a regional Parent-Teachers Association meeting on "Cancers in Children."

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Phoenix will be let in May. The hospital will contain 200 beds, and be located on the Indian School grounds.

**DR. G. FOARD MCGINNES**, vice-president of the American National Red Cross, inspected the Southern Arizona Blood Program at its headquarters in Tucson, and praised the functioning of the new regional service. Dr. McGinnes has been in charge of the national blood program, the medical services, the disaster medical and nursing services, and the nursing, nutrition, and safety services.

**MR. HAL SAVAGE**, president of AWECO MEDICAL OXYGEN THERAPY SERVICE, the foremost suppliers of oxygen in this area, announces that through its recent expansion program, AWECO will now cover the entire state of Arizona. This company is the sole distributor of Linde apparatus and medical oxygen. Linde products need no introduction to the medical profession for they have long since established themselves with the profession.

#### NOTICE

To: Editors of State Medical Association Journals:

The secretary of each local medical society will soon receive in the mail a questionnaire on school health services in his community. The American Medical Association in cooperation with the U. S. Office of Education is making a study of school health services through its Bureau of Health Education. The survey is a preliminary step in efforts designed to bring about improvement of school health programs within the framework of the private practice of medicine. For this reason, it is most important that each local medical society complete and return the questionnaire.

The U. S. Office of Education in Washington will concurrently query the schools. Two different questionnaires which supplement and reinforce each other and contain no duplicate questions are being used. The information requested is needed to determine present strengths and weaknesses in school health services, to indicate needs, and to point up action for the future. The questionnaire has been tested prior to printing and all unnecessary questions eliminated.

William W. Bolton, M. D.,  
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For further information, write to Mead Johnson & Company, Evansville 21, Indiana.

#### NEW "CANCER" FILM RELEASED

A new film, titled "Cancer: The Problem of Early Diagnosis," which has received the approval of the American Medical Association's Committee on Medical Motion Pictures, was made available to the medical profession this week through more than 50 state and regional distributing points.

Through the efforts of its co-sponsors, the American Cancer Society and the National Cancer Institute of the United States Public Health Service, prints for single showings may be borrowed from State Cancer Society offices, State Health Departments, and four regional offices of Association Films located in New York City; Chicago, Illinois; Dallas, Texas; and San Francisco, California.

The film, designed for general practitioners, is based on the premise that if cancer were diagnosed early and effectively treated the death rate might be reduced by almost 50 per cent.

"Cancer: The Problem of Early Diagnosis" is the first in a series of six films to deal with the subject. The succeeding five, to be released within the next two years, will deal with diagnosis of cancer by specific body site.

Prints of the film are available for purchase through Audio Productions, Inc., 630 Ninth Avenue, New York 19, N. Y., the company which produced the film. Prints cost \$150 each, and may be ordered from Audio Productions for pre-view pending purchase.

The film was reviewed in the January 29th issue of the A.M.A. Journal. The comment was: "The photography, animation and narration are excellent."

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## American Academy of Neurology

I would like to announce the establishment of the American Academy of Neurology, whose purpose it is to further and encourage the practice of clinical neurology and to stimulate teaching and research in neurology and allied sciences.

Active Membership in the Academy is open to every physician who has been certified in neurology or in both neurology and psychiatry. Junior Membership is available to physicians presently engaged in postgraduate studies in neurology or who are awaiting certification in neurology. In addition there is an Associate Membership for those who are not certified in neurology but whose interests are in fields related to neurology. It is hoped that because of the unrestricted membership, this association will be representative of the entire neurological specialty and will offer an organ of expression for many of the younger men in the field. The American Academy of Neurology at present has 500 members. The first business meeting was held in Chicago in June, 1948.

The first scientific meeting will be held at the French Lick Springs Hotel, French Lick Springs, Indiana on Wednesday, Thursday, and Friday, June 1, 2, and 3, 1949. Dr. Dave B. Ruskin of the Caro State Hospital, Caro, Michigan, is in charge of the scientific program.

The present executive council consists of Dr. A. B. Baker, Minneapolis, President; Dr. Pearce Bailey, Washington, D. C., Vice-President; Dr. Joe R. Brown, Minneapolis, Secretary-Treasurer; Dr. Frederick Lewey, Philadelphia, Dr. William A. Smith, Atlanta, Dr. J. M. Nielsen, Los Angeles, and Dr. A. L. Sahs, Iowa, Board of Trustees. Communications to the Academy should be addressed to Dr. Joe R. Brown, 19 Millard Hall, University of Minnesota, Minneapolis 14, Minnesota.

A. B. Baker, President,  
American Academy of Neurology.

## SPECIAL NOTICE

Carl A. Peachey, formerly associated with the Academy of Medicine of Toledo and Lucas County, Toledo, Ohio, has been employed as Executive Secretary of Arizona State Medical Association.

Mr. Peachey, having lived in Phoenix for the past year, is well "acclimated," therefore, able to begin his duties without any delay.

There will be a two-week Postgraduate Course in Pulmonary Diseases under the sponsorship of the Committee on Medical Education of the American Trudeau Society, the Medical Section of the National Tuberculosis Association and in cooperation with the University of Colorado School of Medicine in Denver, Colorado, July 18-30, 1949. Tuition fee is \$100.

Application forms may be secured from the Arizona Tuberculosis and Health Association, Box 2225, Phoenix, Arizona. The registration is limited and all applications must be in before June 10.

Advertisers in our journal are carefully selected. Only those meeting our advertising standards may use the facilities of our pages. No advertisement will be accepted which, either by intent or inference, would result in misleading the reader. May we suggest that you review the ads in each issue of our journal and, when occasion arises to prescribe products featured or use the facilities offered, tell them you saw their ad in the Arizona Medicine Journal.



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## Woman's Auxiliary



Mrs. Leslie R. Kober  
Chairman of Legislation, Woman's Auxiliary to  
Arizona Medical Association

Mrs. Leslie R. Kober was born in Pittsburgh, Pennsylvania. She spent her early life in St. Louis, Missouri; graduated from Smith College in 1929 and was married to a Phoenix physician in 1931. She has two children, Suzanne 15, and Freddy 11. She has been a member of the Medical Auxiliary since 1931.

She has been active in Community Service work through Phoenix Junior League for the past 17 years, and was President of the Junior League in 1941-1943.

During the past years she was a member of the following Boards: Florence Crittenton Home, Community Chest Budget Committee, Community Council, Soldiers Recreation Council, General Chairman, Civilian Defense Volunteer Office, Phoenix Civilian Defense Committee, Chairman, Woman's Division Community Chest Drive two years.

At the present she is a member of the following Boards: Maricopa County Medical Auxiliary, Arizona State Medical Auxiliary, Social Service Exchange, Planned Parenthood Committee and Social Service Center—President of the Board.

As Chairman of the Legislative Committee of the State Medical Auxiliary she worked on the passage of Child Colony bills in the 19th session of the State Legislature, and urged the support of all members throughout the state. The results were good. A great many of the ladies either wrote or personally contacted their Representatives and urged their support of this legislation,

as did hundreds of women in other organizations. Our efforts were successful, and after 20 years we finally have legislation enacted which makes the Colony a reality.



Mrs. Robert T. Phillips

Mrs. Robert T. Phillips has served the State Auxiliary this year as Corresponding Secretary, which office she held for the Maricopa County Auxiliary in 1946-1947. Mrs. Phillips was born in Springfield, Illinois, attended Monticello College and received her B. A. degree from the University of Wisconsin. She married Dr. Phillips in Chicago in 1933. Their first Arizona residence was in Jerome.

In 1943 Dr. and Mrs. Phillips moved to Phoenix where he is a practicing pediatrician. They have three children: Judith, 11; Robert, Jr., 8; and John Henry, 2.

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Mrs. Edward M. Hayden

Mrs. Edward M. Hayden was past-president of the Woman's Auxiliary to the Arizona Medical Association for the year 1943-1944. She also served as president of the Pima County Auxiliary for two consecutive years. At present she is chairman of the Revisions Committee of the Arizona Medical Auxiliary.

Mrs. Hayden was born in Minnesota and attended St. Catherine's College of St. Paul, Minnesota and the University of Minnesota.

She was married in 1929 to Dr. Edward M. Hayden, a radiologist of Tucson. She is active in a great many organizations of Tucson. She

was Chairman of the Red Cross Canteen during the war, and was Girl Scout Commissioner for two years, 1939-1941. The Southwest Chapter of the Arthritis and Rheumatism Foundation is her most active interest at present, however, Garden Club, Community Chest Board, St. Luke's Hospital Board and St. Ambrose Church are given as active interest. She is also a State Board member of the Catholic Social Service of Arizona and the Arizona Children's Home Board for many years.

Mrs. Hayden is to be commended on the outstanding work she has done in rewriting and revising the By-Laws and Constitution. Her able assistants on this committee were Mrs. Jesse Hamer and Mrs. Paul Case.

#### YAVAPAI COUNTY

Yavapai County had its regular meeting Thursday, April 14th at the home of Dr. and Mrs. Henry Hough.

Attending from Phoenix were Mrs. Thomas Bate, state president and Mrs. Karl Harris, state treasurer.

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## PROGRAM

•  
of the  
**TWENTY-SIXTH ANNUAL MEETING**  
of the  
**WOMAN'S AUXILIARY TO THE  
AMERICAN MEDICAL ASSOCIATION**

•  
**ATLANTIC CITY, NEW JERSEY,**

**JUNE 6-10, 1949**

**HOTEL HADDON HALL**

•  
Mrs. James H. Mason, *Chairman,*  
Committee on Arrangements

A cordial invitation is extended to all members of the Woman's Auxiliary to the American Medical Association, their guests and guests of physicians attending the convention of the American Medical Association, to participate in all social functions and attend the general sessions of the Auxiliary.

Headquarters will be at Hotel Haddon Hall. Tickets will be available at the registration desk. Please register early and obtain your badge and program.

—————  
**REGISTRATION HOURS**

Sunday ..... 12:00 M. to 4:00 P.M.  
Monday ..... 9:00 A.M. to 4:00 P.M.  
Tuesday ..... 9:00 A.M. to 4:00 P.M.  
Wednesday ..... 9:00 A.M. to 4:00 P.M.  
Thursday ..... 9:00 A.M. to 12:00 M.

—————  
**PRECONVENTION MEETINGS**

**SUNDAY, JUNE 5**

12:00 M. The members of the Hospitality Committee will welcome members and  
4:00 P.M. guests of the Woman's Auxiliary.

**Committee Meetings**

1:00 P.M. Nominating Committee—  
Rowsley Room (first floor)  
Mrs. Jesse D. Hamer, chairman  
8:00 P.M. Finance Committee—  
Bakewell Room (first floor)  
Mrs. Scott C. Applewhite, chairman.

**MONDAY, JUNE 6**

9:30 A.M. Board of Directors—  
Room 134 (first floor)  
Presiding, Mrs. Luther H. Kice, Pres.  
10:00 A.M. Round Table Discussions—  
(Open to state officers and chairmen)  
Hygeia—  
Mrs. Aldace W. Hammond, chm.  
Room 1344 (13th floor)  
Legislation—  
Mrs. Charles L. Shafer, chairman  
Solarium (lounge floor)  
Program—  
Mrs. Harry F. Pohlman, chairman  
Mandarin Room (13th floor)  
Public Relations—  
Mrs. Asher Yaguda, chairman  
Sun Parlor (Lounge floor)  
12:00 M. Luncheon and meeting of the Board  
of Directors  
Bakewell Room (first floor)  
3:00 P.M. Revisions Committee—  
Rowsley Room (first floor)  
Mrs. Roscoe E. Mosiman, chairman  
4:00 P.M. Tea honoring Mrs. Luther H. Kice,  
to president, and Mrs. David B. Allman,  
6:00 P.M. president-elect, for the members of the  
National Board of Directors and state  
presidents and presidents-elect and  
guests, Benjamin West Room.  
Tickets \$1.50. All doctors' wives are  
cordially invited.  
Hostesses: The Woman's Auxiliary to  
the Medical Society of New Jersey.  
8:30 P.M. Fashion Show—  
Ballroom, Convention Hall.

**TUESDAY, JUNE 7**

9:00 A.M. Formal opening of the Twenty-sixth  
Annual Meeting of the Woman's  
Auxiliary to the American Medical  
Association, Vernon Room (lounge  
floor).  
Presiding—Mrs. Luther H. Kice,  
President  
Invocation—Rev. Harvey Bennett,  
Pastor, First Presbyterian Church  
Pledge of Loyalty to the Woman's  
Auxiliary to the American Medical  
Association—Mrs. Eustace A. Allen  
Greetings—  
Honorable Joseph Altman,  
Mayor of Atlantic City  
Browne Holoman, M. D., President.  
Atlantic County Medical Society  
Address of Welcome—  
Mrs. Robert B. Walker, President,  
Woman's Auxiliary to the National  
Society of New Jersey  
Response—Mrs. John S. Bouslog,  
Past President, Woman's Auxiliary  
to the Colorado State Medical Society  
Presentation of Convention Chairman,  
Mrs. James H. Mason



Introductions—Mrs. Luther H. Kice  
 Presentation of President-Elect,  
 Mrs. David B. Allman  
 Roll Call—Mrs. George Turner,  
 Constitutional Secretary  
 Minutes of the Twenty-Fifth Annual  
 Meeting—Mrs. George Turner  
 Convention Rules of Order—  
 Mrs. J. K. Avent  
 Credentials and Registration—  
 Mrs. Mathew Molitch  
 Address of the President—  
 Mrs. Luther H. Kice  
 Reports of Officers—  
 Pres.-Elect—Mrs. David B. Allman  
 1st Vice-Pres.—Mrs. Ralph Eusden  
 2nd Vice-Pres.—Mrs. Wm. W. Potter  
 3rd Vice-Pres.—Mrs. Lloyd C. Harvie  
 4th Vice-Pres.—Mrs. Robt. Flanders  
 Treas.—Mrs. Arthur A. Herold  
 (including report of the auditor)  
 Constitutional Secretary—  
 Mrs. George Turner

12:30 P.M. Luncheon in honor of the Past Presi-  
 dents of the Woman's Auxiliary to  
 the American Medical Association,  
 Rutland Room (first floor)  
 Tickets \$4.00  
 Mrs. Luther H. Kice, presiding

#### Afternoon Session

2:00 P.M. Report of the Board of Directors—  
 Mrs. Luther H. Kice  
 Reports of Chairmen of Standing  
 Committees:  
 Finance—Mrs. Scott C. Applewhite  
 Hygeia—Mrs. Aldace W. Hammond  
 Legislation—Mrs. Chas. L. Shafer  
 Organization—Mrs. Ralph Eusden  
 Program—Mrs. Harry F. Pohlmann  
 Publications—Mrs. Jas. P. Simonds  
 Pub. Relations—Mrs. Asher Yaguda  
 Revisions—Mrs. Roscoe E. Mosiman  
 Report of Special Committee:  
 Reference—Mrs. Rollo K. Packard  
 Report of the Historian—  
 Mrs. Jesse D. Hamer  
 Report of the Central Office and  
 Bulletin Circulation—  
 Miss Margaret Wolfe  
 Report of the Nominating Commit-  
 tee (first reading)—  
 Mrs. Jesse D. Hamer, Chairman  
 Election of the 1950 Nominating Com-  
 mittee  
 4:00 P.M. Round Table Discussion (continued):  
 Hygeia—Mrs. Aldace W. Hammond  
 Room 1344 (13th floor)  
 Legislation—Mrs. Charles L. Shafer  
 Lounge Floor (Solarium)  
 Program—Mrs. Harry F. Pohlmann  
 Mandarin Room (13th floor)  
 Public Relations—Mrs. Asher Yaguda  
 Sun Parlor (Lounge floor)  
 8:00 P.M. Opening meeting of the American  
 Medical Association—Ballroom, Con-  
 vention Hall. Members of the Wom-  
 an's Auxiliary and guests are welcome.

#### WEDNESDAY, JUNE 8

9:00 A.M. General Session of the Woman's Aux-  
 iliary to the American Medical As-  
 sociation, Vernon Room, Lounge  
 Floor  
 Presiding—Mrs. Luther H. Kice  
 Minutes—Mrs. George Turner  
 Announcements—Mrs. Jas. H. Mason  
 Credentials and Registration—  
 Mrs. Matthew Molitch  
 In Memoriam—Mrs. Neil Woodward  
 Resolutions—Mrs. Rollo K. Packard  
 Reports of State Presidents  
 12:15 P.M. Annual Luncheon in honor of Mrs.  
 Luther H. Kice, President, and Mrs.  
 David B. Allman, President-Elect,  
 Rutland Room (first floor)  
 Mrs. Frank N. Haggard, presiding  
 Tickets \$4.00.  
 Guests of Honor: Dr. R. L. Sensenich,  
 president, American Medical Associ-  
 ation; Dr. Ernest E. Irons, president-  
 elect; Dr. Elmer L. Henderson,  
 chairman, Board of Trustees; Dr. J.  
 J. Moore, treasurer; Dr. George F.  
 Lull, secretary and general man-  
 ager; Dr. Morris Fishbein, editor,  
 Journal and Hygeia; and the mem-  
 bers of the Advisory Council to the  
 Woman's Auxiliary.  
 1:30 P.M. Joint meeting of the Advisory Council  
 of the American Medical Association  
 and the Board of Directors of the  
 Woman's Auxiliary,  
 Garden Room (Lounge Floor)

#### Afternoon Session

3:00 P.M. Unfinished Business  
 New Business  
 Report of the Nominating Committee,  
 Mrs. Jesse D. Hamer  
 Election of Officers  
 Installation of Officers and Presenta-  
 tion of President's Pin—  
 Mrs. David W. Thomas  
 Inaugural Address—  
 Mrs. David B. Allman  
 Convention Courtesy Resolutions—  
 Mrs. Norman Nathanson  
 Minutes  
 Adjournment

#### THURSDAY, JUNE 9

9:30 A.M. Meeting of the Board of Directors—  
 Solarium, Lounge Floor  
 Presiding—Mrs. David B. Allman  
 10:30 A.M. Conference of State Presidents, Presi-  
 dents-Elect, National Officers and  
 Chairmen of Standing Committees,  
 Solarium, Lounge Floor  
 6:30 P.M. Annual Dinner of the Woman's Aux-  
 iliary for members, husbands and  
 guests  
 Vernon Room (Lounge Floor)  
 Mrs. James H. Mason, presiding  
 Formal—Tickets \$6.00  
 9:00 P.M. Reception and Ball in honor of the  
 President of the American Medical  
 Association  
 American Room, Hotel Traymore

#### FRIDAY, JUNE 10

Exhibits at Convention Hall

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